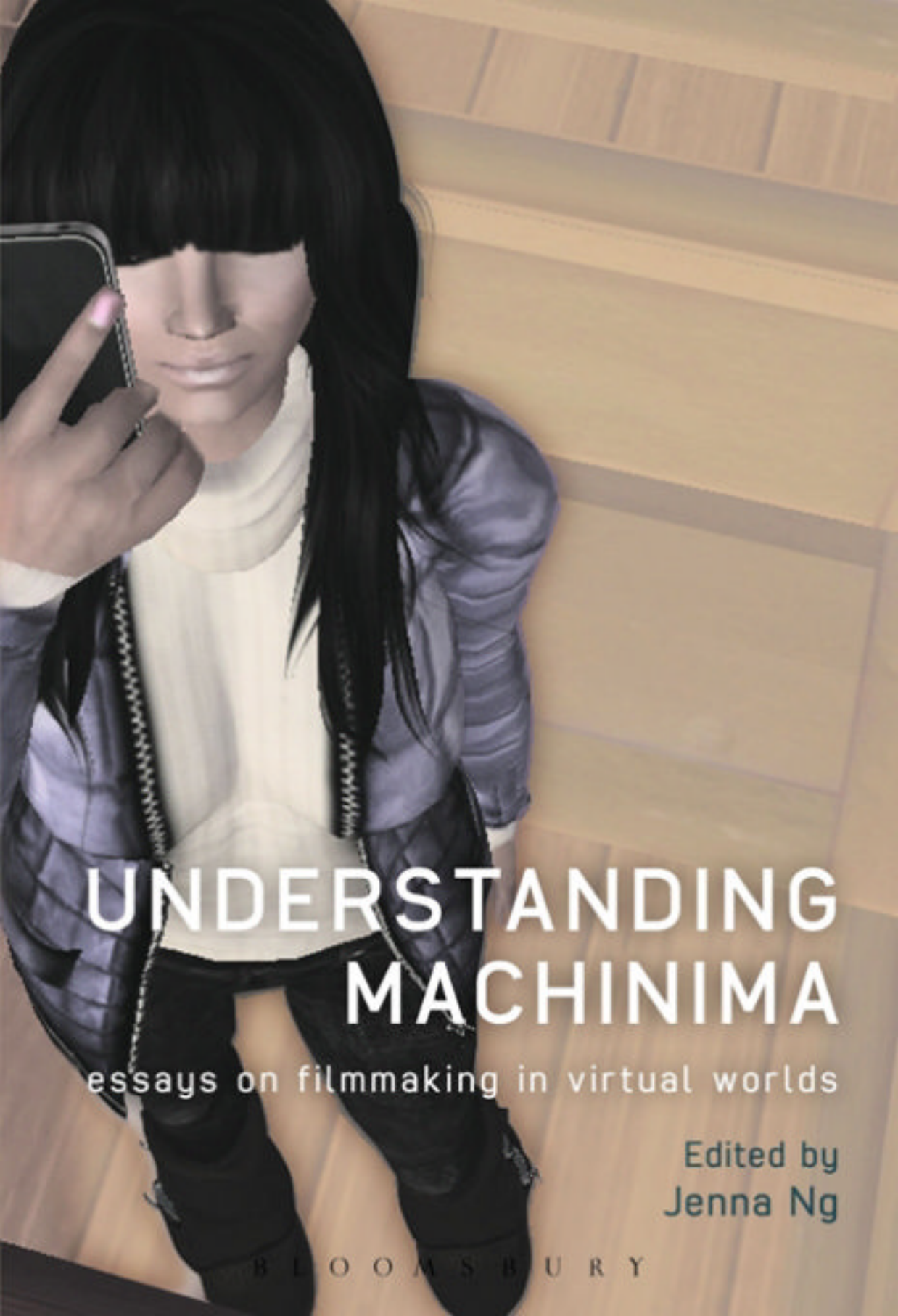

UNDERSTANDING MACHINIMA

essays on filmmaking in virtual worlds

Edited by
Jenna Ng

BLOOMSBURY

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Preface

Henry Lowood

Machinima is a born-digital, adolescent medium. It is reasonable to affirm that the birth occurred in 1996 with the Rangers's *Quake* (1996) movie, *Diary of a Camper* (1996), which means that the sixteenth birthday occurred this year. Paraphrasing the Stray Cats' cover for John Hughes's film of the same name, "sixteen candles" make a lovely occasion for intensifying critical attention to this emerging medium in both retrospective and prognosticative modes. Indeed, the publication of *Understanding Machinima* adds to the growing scholarly literature on machinima, which includes recent publications such as *The Machinima Reader* (Lowood and Nitsche 2011) and the special issue of the *Journal of Visual Culture* (Rojo 2011) devoted to machinima.

My own perspective on machinima has been academic, historical, and curatorial. I write about machinima, rather than making a lot of it, with a focus first on its history as a found technology developed almost entirely by its users (players and artists). Second, I have tried to identify the qualities of digital games and their players that create media for player expression. Players have made machinima alongside related activities such as high-performance play and participation in player cultures. A common element of these activities that has consistently fascinated me is that players find ways to extend a library of narrative elements of games and exploit technologies worked out of games to produce all kinds of game-based media artifacts, of which replays and machinima works are only two examples. This combination of technical mastery, high-level play, and performance is what I have called *high-performance play* in my writing about the early history of machinima. These activities—whether consciously or not—imply noteworthy modes of media capture, production, and preservation. It was thus almost the proverbial "no-brainer" to supplement my writing with curatorial activities such as the Machinima Archive and the Archiving Virtual Worlds collection, or the creation of "Game Capture: Archives of Multiplayer Game Worlds" for the Game-On exhibition at the Australian Center for the Moving Image in 2008. Put another way, I felt it was my duty to archivally capture activities based on gameplay capture.

I bring up these various activities to highlight one of the reasons why machinima is important. By virtue of its very nature, machinima compels attention to techniques of preservation of an interactive, performance-based digital medium. Why? The reason is that machinima is itself a "capture-based" medium. Whether made by players working from the inside out or by artists working from the outside in, the practice of machinima-making has been heavily dependent on the deployment, discovery, or creation of assets found in a game or virtual world, involving or followed by processes of extraction, capture, modification, compositing, editing, and encoding that result in the creation of a new media object. Perhaps it is just me, but this relationship of machinima-making to the stuff found and things done in a virtual space offers new ways of thinking about historical, archival, and preservation work pertaining to these same virtual environments and what people do in them. The methods of machinima, ranging from demo and replay production to P.O.V. video capture and then to asset capture and editing, can all be repurposed with the intention of documenting virtual and game worlds. This potential is evidenced by projects such as Phil "Overman" Rice's *Thresh v. Billox* demos; Douglas Gayeton's *Molotov Alva and His Search for the Creator* (originally titled *My Second Life: The video diaries of Molotov Alva* (2007)); Bernhard "Draxtor Despres" Drax's reportage journalism in *Second Life;* or the Nogg-aholics' efforts to document and preserve inaccessible spaces in *World of Warcraft* (2004), to name but a few historical examples. Performance theorists and historians have noticed. Gabriella Giannachi, for example, applied techniques inspired by game replays and machinima camera placement to her documentation efforts for Blast Theory's mixed-reality work, *Rider Spoke* (2007), at Ars Electronica in 2009. So, it is clear to me that one reason why critical and historical studies of machinima are important is that they provide fertile ideas for other areas of work on new digital media and performance documentation.

Of course, there is a provocative side to any questioning of the importance of machinima, and, by implication, the study of it. I suppose that the immediate negative answer to this question is to focus on the limitations of this form of expression—as a niche medium, as insider culture glorifying specific games, as a ragged performance platform, or as a medium deprived of narrative potential by its dependence on game experiences. Even if I accepted these objections—and I do not—there would remain a core possibility in machinima that would make the effort to understand it worthwhile. I shall describe this possibility as The Puppet Theater of the 21st Century. I do not mean the puppet theater as a specific entertainment but, rather, a line of thinking that was opened up by Heinrich von Kleist's magnificent essay, "Über das Marionnettentheater" (1810) and which continues today through

proposals such as Jaron Lanier's notion of "Homuncular Flexibility" (2006). The basic idea connecting these writings is that machines give us visions of performance that are not just beautiful or even graceful but that are also, and just as importantly, not available to human performers. Human beings are restricted physically by the limits of our bodies and hindered by the constraints of consciousness and self-awareness. The intriguing idea here is that perhaps human performance can be enhanced if we can learn to work with machines. In Kleist's essay, one of the interlocutors suggests "in no uncertain terms that any dancer who wished to improve his art might learn all sorts of things" from marionettes. Some 200 years later Lanier has suggested that his work with virtual reality offered another path to a similar result, since "it turned out that people could quickly learn to inhabit strange and different bodies and still interact with the virtual world" (np). This is where I believe that machinima might come into the picture as a platform for mediated performance. Of course, it is not uncommon for machinima-makers to refer to their process as a form of virtual puppeteering or in similar terms. I am suggesting that this way of explaining machinima is more than a metaphor for explaining how it is made; rather, it goes to the heart of what makes machinima a unique and intriguing medium. It is human beings learning how to perform with virtual machines and game engines.

Machinima has been appreciated in many ways, whether as an unexpected outcome of game technology, as an economical and accessible alternative to frame-based animation, or, following Henry Jenkins (2011), as a form of DIY media. Through its childhood, machinima has been characterized in terms of unanticipated innovation, subversion, modification, and hacking, as well as ideas about new narratives, forms of production, spectatorship, media consumption, and fan communities. In other words, machinima offers plenty of opportunities for taking positions about the promise and potential of a new media format. As machinima moves through its adolescence into young adulthood, its many parents, students, and teachers look forward to the next sixteen years of innovation and creativity. On the cusp of this transition, the essays in this volume bear witness to the fruitful ways in which the effort to understand machinima as a maturing media form delivers the goods for critical studies of new media.

December 2012

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Introduction

Jenna Ng

The drunkenness of things being various

World is crazier and more of it than we think,
Incorrigibly plural. I peel and portion
A tangerine and spit the pips and feel
The drunkenness of things being various.

LOUIS MACNEICE, 1935, np

The germ of the idea for this book began when I was sitting in my flat in northern Sweden, staring out of the window at a howling Arctic winter blizzard. Two things struck me: the first was the inexorable passage of the elements—the gray rains of the autumn having given way to the flurries of ice crystals; the dark snow now blanketing the ground that would give rise in the spring to the gushing river artery which ran through the town. I had an epiphany: that everything was not only interconnected, but that existence itself—the very *thingness* of us all—is not discrete, but the ebb and flow of those connections.

The second was that I was looking out of my window at an aesthetic which could very well have come out of an alternative reality, so warm and dry was

I in my room while the storm raged outside. I did not, as Louis Macneice (1935) did in his poem "Snow", look at roses against the pane to bring to me his inspiration of "the drunkenness of things being various," but I would like to think I had a similar insight. The pluralities of reality are such that participants in both physical and virtual worlds are not discontinuous experiences but parts in a fluid course—a veritable wave function—in which we dip and dive, equally comfortable in both as well as all their shades inbetween.

I started formulating the book in the wake of these two thoughts. Machinima—commonly defined as films made by real-time three-dimensional computer graphics rendering engines—had already fascinated me, primarily because it presents many critical issues for studying film and media: its subversiveness in using media as "found technology" (Lowood 2008) to achieve goals beyond those prescribed by its original form (primarily games); its born-digital nature as a medium created, produced, and exhibited entirely with digital technologies; its economic structure (where millions of films are produced and shared without any money changing hands directly); its comfortable, almost associative straddling between gaming, fan, and film cultures; its uses for social and political criticism; its democratic promise as a medium available to most people with a reasonably fast computer who can now make films with any number of scenes which would have been far more difficult to animate or film in real life (car explosions, alien armies, and epic battles are all relatively easy with machinima). A small but growing collection of work is already well exploring these issues and more: Henry Lowood and Michael Nitsche's *The Machinima Reader* (2011) stands as a pioneer critical work of machinima; the special issue on machinima in the April 2011 *Journal of Visual Culture* co-edited by Susan Rojo, Matteo Bittanti, and Lowood (Rojo *et al.* 2011) is another.

Nevertheless, I want to examine machinima in the current collection in terms of two more specific inquiry strands. The first is how machinima has become connected with many other tools and media forms so that it is now less a discrete, distinguishable media form than a fluid *dialogue* of and between media—reproducing them, translating them, merging them, subverting them—a vital conversation flitting between, among others, theater, film, videogame, puppetry, documentary, mockumentary, and music video. The origins of machinima are in the subversion/hacking of one media form (videogame) into another (narrative cinema) (Lowood 2006), forming a kind of *mise-en-abyme* of media as media begets media, endlessly reproducing each as machinima moves fluently—more so than any other media form—through that conversation. This is not a flow of content in the sense of media convergence (Jenkins 2006), but a flow of media and mediation itself. The *thingness* of machinima is not just the images one sees flickering on the (more often

than not) small screen, but its vital interconnectedness and intense dialogue with other media forms.

The second strand is the diversity of this machinima world and how it stands against all other realities—physical, animated, virtual, blended, hybrid, augmented. Machinima is distinct from live action in that it is not recorded from physical reality; similarly, it is a different creature from computer-generated animation, whose images are composed out of basic geometric shapes. Machinima is generated by a game engine, or software, of the world in which it is recorded; it is thus of a certain logic, acting and behaving according to the (computer-coded) laws of its pre-existing virtual world. *The ontology of machinima is the engagement of these digital worlds*—its profilmic emerges from realities as directed by the game engine with all its applicable physical and aesthetic laws: how the avatar moves, what the terrain looks like, how the other characters behave, how the objects shine in light and fall in shadow. The physics engine determines the physical properties of all the objects in the game world: how they bounce, break, bend, disintegrate. The desire for representing reality is as old as media itself, but what is particularly fascinating about machinima is how it engages entirely with *mediated* realities and, by extension, lives as lived inside those worlds. It is perhaps the recognition of such an appropriation in machinima not just of "cultural material" but of this gesture towards the digital realities in which we live that gives us the jolt of recognition, the same wonder and enchantment as from early cinema in how we were endeared by the reproduction of the simplest things, "the slightest incidents of the world about us" (Kracauer 1997, 171). As Christian Keathley wrote: "Indeed, as the story goes, the viewers of a century ago who watched the Lumière Brothers' *L'Arroseur arrossé* (1895) were delighted less by the scene being staged for their amusement than by the fact that, in the background, the leaves were fluttering in the wind" (2000, np). In that sense, machinima as the documentation and reproduction of mediated realities (in virtual worlds, in videogames) is arguably a continuation of that desire for representation—just in and of different worlds.

The intention of this collection is thus not so much to examine the broad critical issues concerning machinima as previous scholarship has done, but to more specifically explore the ways in which the medium is employed in its diverse mediated realities—the *mise-en-abyme* of media worlds within worlds—all as plural and connected as the snow world outside my window that night. In this respect, two developments in machinima also mark the framing of this book. The first is that the production of machinima, which started as primarily a form of documentation for gameplay (Lowood 2005), is now noticeably shifting to non-videogame engines, including virtual world engines such as Second Life and 3D animation software such as *Moviestorm*

(2008) and *iClone* (2006), a development that has not gone unnoticed and even termed as "outside-in" machinima (Nitsche 2007). One result is that the use of machinima has become more structured and tailored as the game engine increasingly becomes a tool for a specific purpose. If we can classify the machinima of gameplay documentation and game-related narrative as a "first wave machinima," then this shift marks a "second wave," where machinima is more than just an innovative way of creating moving images to tell standard, linear narratives, but instead is being re-hewn into a more liberated and free-form vocabulary. I believe its creative possibilities are as yet untold, not so much because machinima is a medium operating in environments without the physical laws of real life—"just think what you can do without gravity!" admonishes Peter Greenaway (2010)—but because, as I try to show in this collection, it is in such free-flow dialogue with other media forms, skating across ponds of inspiration from form to content to software to copyright. Many machinima today, for example, use global license-free music, and import detailed sculptured prims and three-dimensional models to construct visual fields, often with intense surreal images.[1] There is a growing sense of a liberal media literacy, one which comfortably reads games, cinema, and painting, generating a constantly mutating vocabulary that is still not quite definable or categorizable, even if it might, as soon as it appears, no longer be strange and wonderful (just as the fluttering of leaves in cinema no longer excite modern audiences). In that sense, the expansive potential of machinima exceeds its functionalities as an expressive tool—instead, it promises the visual vocabulary for an alternative articulation of visual and haptic experience.

The second (related) development is machinima's movement from an emphasis on narrative or on its original game to works which are less linear with less straightforward styles, involving more complex builds, more post-production work, more nuances. As Jason Silverman writes, "in the early 1990s, the machinima movement has for the most part spawned self-indulgent, sophomoric movies. But things are changing. Of late, machinima has begun to explore more sophisticated, nuanced storytelling" (2005, np). This movement takes place over a graded spectrum rather than a transition between two groups of films (clear linear narrative, definable genre, references to game versus non-linear narrative, less definable, less dependence on game references).[2] In this respect, machinima's countenance with the real, and thereby its role as a mediating tool, becomes increasingly complex. I pointed out above that the ontology of machinima is its engagement (documentation, builds, mediations) with digital realities; today this engagement/slippage is moving into the mainstream. The 2012 "The Real Deal" advertisement for the Toyota GT86 mines precisely this traction

between machinima reality and film reality (a supreme irony, since an advertisement is itself the greatest culmination of artificial reality—a wholly socially created desire for the material consumption of an unnecessary luxury good!). In the advertisement, an avatar rejects the "reality" of his virtual world—"there is no 'alive' in this town. Just pixels, pretence and driver assist"—and drives his GT86 (a sequence set to Edith Piaf's *Non je ne regrette rien* invoked as the now-famous time-to-awake-from-the-dream-world "kick" soundtrack from Christopher Nolan's *Inception* (2010)) towards the "real" by smashing through a *Truman Show*-esque high wall to land—now filmed as live action—on a tarmac road set in rolling countryside. The language here is no longer that of cinema as a media singularity but of its interstices which trade between different realities, where the aesthetic of machinima's reality counter points the physical reality which we take for granted as the basis of our bodily existence. It is a crude juxtaposition—the real deal, of course, is that you buy the car and make a multinational a little richer. However, as a starting point, *this is precisely the language of machinima—the diversity of realities, the richness of its worlds, the plurality of its various-ness*. That language can (and will) get so much more evolved and nuanced. Maya Deren writes: "A radio is not a louder voice, an airplane is not a faster car, and the motion picture … should not be thought of as a faster painting or a more real play" (1960, 166). In the same way, machinima should not be thought of as a less real cinema: I do not believe in the commercial value of machinima in replacing cinema but, rather, in being its own medium of visual or haptic language (and possibly combining the two), articulated by a camera not only liberated of its physical regime but, more importantly, operating in the aesthetic playground of its medial richness, and for these reasons thus capable of an unprecedented literacy expressing all our diverse states of being and realities. The fact that this literacy is used in a mainstream car advertisement shows just how fluent we have become in it, an indication which I think points towards a significant direction for machinima's future. In these ways, machinima is truly still a medium in flux, and a snapshot of its development at this stage not only reaches out to (and is maturing into?) alternative diverse ways and modes of engagement—teaching, creativity, culture, commercial promotion—but also shines a light ahead into its future.

The collection

This collection is divided into two parts: machinima (1) in theoretical analysis; and (2) as practice. Both parts work to explore machinima in terms of the theoretical challenges it poses as well as its manifestations with respect

to its interactions with other media forms. Chapters 1 to 6 fall into the first half, with the first two chapters specifically thinking through machinima in relation to cinema. In "Machinima: Cinema in a minor or multitudinous key?," William Brown and Matthew Holtmeier examine machinima by drawing on Gilles Deleuze and Félix Guattari's concept of the minor, arguing how machinima is the minor by disrupting "major" forms that are cinema and gaming. In particular, Brown and Holtmeier use one of machinima's most prominent works, Alex Chan's *The French Democracy* (2005), to demonstrate how machinima as minor cinema gives voice to French minority ethnic youth otherwise invisible and unheard in mainstream French media. In the process, they argue that machinima shows not "the people," but, taking Michael Hardt and Antonio Negri, "the multitude." Chris Burke continues the dialogue in "Beyond bullet time: Media in the knowable space" between machinima and cinema, this time by looking at knowability (and thus of reality and truth) in their respective spaces. Burke argues for the knowable reality in machinima (in terms of quantifiable space and time) and compares it to knowability in two films: Michelangelo Antonioni's *Blow Up* (1966) and *The Matrix* (1999) by Andy and Lana Wachowski. Ultimately, Burke identifies how machinima offers us a plastic way of mediating our world ("in the simulated space of a video game, we have managed to extract not just image and sound for manipulation, but space-time itself"), and calls for new syntax and stylistic approaches to further develop machinima.

The next two chapters push the question of the nature of machinima in relation to other media forms. In Chapter 3, "Be(ing)dazzled: Living in machinima," Sheldon Brown explores the wider dialogue between machinima and digital media via his own art projects, such as "MetaStasis/MediaStatic," "Vorkapitchulator," and "The Scalable City." Exploring "the sensibilities and processes that we have developed in digital media over the previous several decades," Brown identifies five types of media practices and environments as "translations" of machinima: (1) "reverse machinima" (where cinema evokes virtual worlds); (2) satellite imagery; (3) interactive projection screens; (4) captured data from interactive play session; and (5) 3D fimmaking. In "Moving digital puppets," Michael Nitsche, Ali Mazalek, and Paul Clifton discuss machinima as a form of digital puppetry, with their particular concern being the means and techniques of controlling expression for machinima performances. Covering a range of control schemes of videogames to control expressions in digital puppetry, ranging from early first-person shooter controls, gamepads, to more recent motion controllers, body as interface, body armatures, and Kinect, Nitsche *et al.* investigate the challenge of enabling expressiveness for the virtual puppet in machinima.

The final two chapters in Part I think about machinima in relation to

other genres. Lisbeth Frølunde explores machinima as a "hybrid animated film" or "hybrid text" combining machinima with live-action imagery. Using M. M. Bakhtin's concepts of heteroglossia, genre, and chronotope, Frølunde reads Bente Milton and Mikkel Stolt's full-length feature film, *My Avatar and Me* (2010), as such a hybrid text, highlighting how the multiplicity, diversity of voices, intertextualities, and interplay of genre conventions deepen our understanding of the work and the richness of both machinima and live-action film. Frølunde also calls for greater diversity in narrative, visual, and compositional styles, such as in the way of hybrid texts, for the evolution of machinima: "Hybrid films interweaving machinima and live action, such as *My Avatar and Me*, can offer just such alternative multiple viewpoints on our life journeys, viewpoints I find lacking in highly self-referential machinima." In Chapter 6, "Dangerous sim crossings: Framing the Second Life art machinima," Sarah Higley contributes an insightful and much-needed chapter analyzing Second Life art machinima, about which too little has been written. Higley's discussion proceeds on two vectors: the first is in relation to the concept of the frame—the *parergon*—a discussion which Higley takes from Peter Greenaway's goading, in an interview following review of entries to the May 2011 MachinimUWA III, to abandon in making machinima. She then takes a virtuoso tour of Second Life machinima, particularly experimental machinima artwork such as Lainy Voom's *Push* (2009), Pia Klaar's *SurreaL* (2010), Bryn Oh's *Rusted Gears* (2011), the Second Life machinima builds for the 2010 World Expo in Shanghai and many others, by examining in depth their unique look and aesthetics in comparison to other media forms.

Chapters 7 to 12 in Part II take a different direction from the theoretical concerns of Part I, turning instead to the multiple employments of machinima in different contexts. The reason for this change is to reflect on the developments of machinima since its recording of gameplay, highlighting its changing practical uses. The first three chapters explore the use of machinima in the context of art, performance, and documentary. In "The art of games: machinima and the limits of art games," Larissa Hjorth discusses machinima as "a melting pot for rethinking the convergence and boundaries" between machinima, new media, games, and art. Referring to online interventions such as *Velvet-Strike* (2002), machinima such as Eddo Stern's *Sheik Attack* (1999), and Cao Fei's Second Life project, *RMB City* (2010), Hjorth explores the role of art in exposing media depictions and the artifice and illusions of the images we consume, where game art is not simply for play but also a space for critique and reflection. In particular, Hjorth examines Cory Arcangel's work in his 2011 *Pro Tools* exhibition at the Whitney Museum of American Art to explicate the intersections between machinima, games, and art. Joseph DeLappe extends the discussion in "Playing politics: machinima as live performance

and document" by describing several of his own online and mixed reality works of interventionist performance in games and virtual communities, such as *dead-in-iraq* (2007), *The Salt Satyagraha Online—Gandhi's March to Dandi in Second Life* (2008), and *Twitter Torture* (2009). In thus placing machinima, DeLappe argues for its consideration as a media form beyond the recording of events in virtual worlds for documentary purposes, but also to include the experiences of mixed realities both ingame and through projections in physical environments, with "such ingame/inworld actions before live and virtual audiences functioning effectively as a new type of real-time, live machinimatic performance." Chapter 9, "Virtual lens of exposure: aesthetics, theory, and ethics of documentary filmmaking in Second Life," Sandra Danilovic considers machinima as documentary filmmaking, or docu-machinima—the convergence of machinima and documentary filmmaking in 3D virtual worlds. Like DeLappe, Danilovic uses her own machinima work, *Second Bodies* (2009), an award-winning semi-autobiographical, point-of-view documentary, to illustrate her investigations of docu-machinima's aesthetic, performative, and technical dimensions which, while complex, also create new possibilities for filmmaking and filmic expression.

The remaining three chapters in the collection detail machinima projects used either as research projects or as teaching tools. In "Call it a vision quest: Machinima in a First Nations context," Elizabeth LaPensée and Jason Edward Lewis discuss machinima as a means of representing indigenous people, culture, and art. The authors highlight in particular the "futuristic" aspects of machinima as an effective leverage to combat the more common depictions of First Nations people as being "in an idealized past." They examine in particular Mohawk artist Skawennati's science fiction/cyberpunk machinima series, *TimeTraveller* (2009), which "uses Aboriginal history to look both forward and back in time to understand the role First Nations people have played and will play in North America." The authors argue for the storytelling malleability of machinima and ultimately its role for a more culturally critical media approach to creating narratives in media. The final two chapters examine machinima as a teaching tool on university courses. In "World of Chaucer: Adaptation, pedagogy, and interdisciplinarity," Graham Barwell and Christopher Moore discuss the pedagogical and learning aspects of a successful teaching trial in which students from two different Arts and Humanities disciplines—English Literature and Digital Communications—were brought together to produce a machinima adaptation of a story from Chaucer's *The Canterbury Tales* using *World of Warcraft* (2004). The discussion not only outlines the results of their trial but also discusses their problems, solutions, and suggested best practices. Barwell and Moore also demonstrate the role machinima-making can play in the acquisition of digital literacy skills as well as in supporting

interdisciplinary collaboration in higher education. In the final chapter, "A pedagogy of craft: Teaching Culture Analysis with machinima," Jenna Ng and James Barrett advocate the idea of machinima production as craft via three frameworks—creativity, knowledge, and dexterity—and argue how machinima offers opportunities to learn practical skill sets. In particular, Ng and Barrett use the Cultural Analysis course taught at Umeå University in Sweden as their primary example, in which undergraduate students study "how normative roles are assigned and mediated in culture according to hegemonic discourse, including gender, generation, age, class, family, occupation, sexuality, religion, and ethnicity." In the course's redesign, one component on digital culture and theory was diverted to the making of a machinima film to show the students' understanding and crafting of argument instead of having them write essays. The authors thus argue for using machinima as a pedagogical tool which can educate the learning of visual and digital literacies, as well as production skills in film, music video, theater, design, and performance, lessons not possible for traditional theory-based humanities teaching.

Finally, the collection is book-ended first by a preface from Henry Lowood, curator of videogames at Stanford University and pioneer scholar of machinima, and finally by an interview with Isabelle Arvers, French machinimist, educator, critic, and journalist. Lowood lays out the significance of machinima specifically as a "born-digital, adolescent medium," pointing out that our concern should not only be to critically engage with machinima as a medium worthy of study, but also in looking at ways forward, to take "positions about the promise and potential of a new media format." Arvers presents a similar take on machinima in her work, as Jenna Ng's interview with her covers her projects using and teaching machinima in different contexts, from inspiring creativity in teenagers to advergaming, to exploring communication and marketing trends at cocktail functions with corporate executives. These two "book-ends" thus also demonstrate the core concern of this collection—to explore the diversity of machinima today, as well as to point the directions, trends, and projects in which machinima is currently and may in the future be engaged.

In the interstices

The collection is also a multi-media text in that it incorporates both print and digital media. This is done by incorporating a Quick Response (QR) code into *every* chapter which links to its own unique mobile website (the home

website is at http://m.understandingmachinima.com; there are also individual web addresses printed underneath each chapter title if a reader is unable to access or prefers to bypass the codes). The mobile website features all the digital content associated in each chapter, such as machinima videos, hyperlinks, online pdfs, Flickr images, and so on. Capital alphabetical letters in superscript indicate the places in the text where such digital content should be referred. The specificity of the website's mobility is a crucial part of its design: dimensions of text were designed to fit a mobile screen; the most minimal of text and images were taken into account to decrease download time; space and text were apportioned to ensure the most comfortable small-screen reading experience; colors, font sizes, and types were all chosen with the reader's comfort in mind. The intention in building these mobile websites was not to tack the website onto the text as a supplement, which is usually how it is done. Rather, the digital content forms *an integral part of the text*, so that the book is essentially a dialogue between its print content and its online digital content. The mobility of the website is thus necessary to facilitate the fluency and volubility of this exchange, whereby reading the text is no longer confined to the bound book, but instead moves easily between the page and the mobile screen, between the hand and the eye, where each can integrate with, enhance, and complement the other.

The decision to incorporate QR codes in this way stemmed from two motivations. The first is so that the collection itself reflects the medial dialogue of machinima which, as mentioned, is spun between videogames, virtual worlds, digital cinema, the World Wide Web, and other digital media. Indeed, this is one of its most fascinating elements—the interconnectedness of things and its thingness in the ebb and flow of those connections. To baldly transfer the study of machinima onto a printed page, strait-jacketed into black text on a cream background, seemed to me a shameless robbery of its beauty. The second motivation is practical: machinima is a born-digital media—it is already all online—and it would be a pity to cut out its videos—the primary objects of study—simply because of restrictions posed by the materiality of a print text. It would also be restrictive to confine scholarship to just page and paper, ignoring a huge wealth of online materials, most of them freely available. I am aware that this latter issue connects to numerous larger questions: for example, the role of the digital humanities in terms of how digital technologies interweave, connect to, and interact with the teaching, learning, research, and scholarship of humanities subjects; or the linkage of physical objects (such as a print book) to networks (in other words, perhaps, the fruition of the Internet of Things, whereby physical objects could be co-opted into a digital information network, each with its own IP address, its routeable pathway for giving and distributing information), just to name

a few. Again, I see the same sense of medial flow which first struck me while looking at the bare-branched trees outside my window in the winter storm. *Understanding Machinima* takes its design in that larger question of placement in this flow of media and information: what if I could make a book simultaneously physical and digital, shifting between printed page and video clips, online images, interactive maps, hyperlinks? What if I could add digital dimensions to a physical research output so as not to substitute the latter but to augment it? What if I could include print texts into the media ecology of the digital, rather than setting them up in opposing binaries (online journals versus print journals, books versus ebooks, articles versus websites, etc.)? I started to turn over in my mind the possibility of creating a text which could not only organically integrate digital and physical content so that one flowed to and from the other, cross-referring each other and allowing for interactivity, but also take into account mobility and the portability of digital devices. By such integration, the physical could use the modalities of the digital to stay fluid and changeable in keeping with the latter's immateriality, while still retaining the ease of use and reading that comes with the former. The result is the design of the present collection.

Machinima now

Lowood and Nitsche suggest that machinima is "a moving target" (Lowood and Nitsche 2011, vii). Its implied temporality is its presentness; its form lies in its non-form. Machinima is moving because its potential is constantly being pushed and explored: the Machinima Expo (http://www.machinima-expo.com/), an annual online celebration of the best machinima produced by Rick Grove, Pooky Amsterdam, and Kate Fosk, is a dramatic show-case of how much machinima has changed over the years and an effective platform for its discussion and debates, reminiscent, to me at least, of an annual conference gathering of a field. Machinima is also borne along by the sheer velocity of media developments. For instance, Second Life is now being made available on Steam (an online game platform with instant access to over 2,000 games and sharing possibilities with over 4 million gamers) (Linden Lab 2012) and this will invariably affect the development of machinima as well.[3] The nature of machinima is also changing in terms of how it is being embraced by mainstream media corporations. Hatfilms, described on their website as "a fresh, young, creative team made up of film production and marketing graduates," makes machinima in the latest games (as of writing) such as *Minecraft*, and counts Micosoft, Sony Ericsson, Oxeye Game Studio, Lionhead Studios as part of their clientele. In such a pair-up, *their machinima has effectively become*

co-opted into a deliberate marketing strategy, a direction completely counter to comparable media industry trends where publishers and music companies still fire off warning legal letters at the slightest hint of any appropriation of their copyrighted material. Indeed, Hatfilms's winning approach lies as much in the setting and recognition of the game world among fans as it does in the deliberate grafting of their signature laddish jokes and expressions into the game's subculture (a typical joke in *Minecraft* (a sandbox game in which things are built with square blocks): "hit him with your blockey fist!"), albeit a culture targeted towards a typically younger and male-dominated audience. Pulled in all these directions, machinima has much to cut its teeth on, and it will be happening sooner rather than later.

In this sense, even as machinima itself evolves, it also changes games in this medial dialogue in terms of the conception, articulation, and manifestation of the game as a media form which co-opts culture. Jaron Lanier writes somewhat scathingly of what he considers "second-order expression," as opposed to "first-order expression," which he explains as "when someone presents a whole, a work that integrates its own worldview and aesthetic. It is something genuinely new in the world." Second-order expression, on the other hand, "is made of fragmentary reactions to first-order expression. … A mashup in which a scene from [*Blade Runner*] is accompanied by the anonymous masher's favourite song is not in the same league [as the movie]"[4] (Lanier 2011, 122). Lanier does not specify machinima as being one or the other, but one might suspect that placing a sequence of *Halo 4* battles to casual banter between three English blokes about how one of them pressed the wrong button (and including a sing-song rendition of "die die die die die die die") would probably relegate it to the latter. Yet that would again assume that machinima is a discrete media form, a product that can be held up on norms and judgments of taste, aesthetic, and quality. Instead, as I have suggested, it might also be useful to see machinima as a conduit through which we can run sensemaking schema about our fluencies between different realities, different ways of living, different modes of behaviors. This is not so much about the intertwining of physical and virtual worlds as it is about the *dialogue* between them—the interstices rather than the object—and that conversation could be anything from media to culture to wrongly pressed buttons. The randomness of creativity has long eluded a formula, yet in machinima and in the creativity it engenders we find some of that randomness and, indeed, madness—games which become tools which become expressive instruments which become art palettes—because it is not in any restrictive discrete form but flows freely in the interconnectedness of things and media. The future of machinima lies in continuing this dialogue not only with unpredictability, but also with indescribable excitement.

Notes

1 I am indebted to James Barrett for pointing this out to me.

2 I am indebted to Sarah Higley for these thoughts. See also Pace *et al*. (2011) for a statistical analysis accompanying the coevolvement of production techniques, content creation tools, and community standards in machinima.

3 Again, I am indebted to Sarah Higley for pointing this out to me.

4 It should be noted that Lanier is hanging on to a specific concept of authorship here, namely the Romantic lone genius idea that is being seriously challenged in the multi-author framework of digital authorship. Lanier also side-steps the issue that *Blade Runner* (the film) was adapted from a book, whose author was obsessed with Gnostic and Platonic ideas of human life. My thanks to James Barrett for pointing this out to me.

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PART ONE

Thinking machinima

http://m.understandingmachinima.com/chapter1/

1

Machinima

Cinema in a minor or multitudinous key?

William Brown and Matthew Holtmeier

Game engines and virtual worlds are often used for creating machinima, which predominantly are movies made by amateurs who lack the equipment and/or the professional skills required to create films or animations in the traditional sense. Although he acknowledges that barriers of entry remain relatively high for "machinimakers," Robert F. Nideffer (2011) is also correct in suggesting that machinima can be used as a political tool. In this chapter we will develop a political consideration of machinima in relation to Gilles Deleuze's concept of the "minor" as developed in *Kafka: Toward a Minor Literature* (Deleuze and Guattari 1986) and subsequently in *Cinema 2: The Time-Image* (Deleuze 2005, 207–15). We argue that machinima enables individuals without the means to become purveyors of official histories/memories to be what Deleuze terms "intercessors" (Deleuze 2005, 214),

or storytellers who can challenge dominant myths. To this end, we examine the "minor" in relation to *The French Democracy*, a 2005 machinima made by Alex Chan (or Koulamata as he is sometimes known)[A] in response to civil unrest in France using Lionhead's game *The Movies*, released in the same year.[1]

While we feel that Deleuze's concept of the minor is a particularly useful one for helping to think through machinima in general and *The French Democracy* in particular, we should clarify that we do not see the "fit" between minor and machinima in general as being an exact one. Not all machinima need be "minor," not least as it has come to be used in quite "major" films, as we shall see. But we do hold that machinima can help us to refine our understanding of the minor as much as the minor can help us to understand machinima. In order to explain more fully the mutual enrichment, or feedback, that we see between machinima and the minor, we shall first explain what the minor is, how the minor has been used to analyze certain kinds of cinema, and how it is useful for us to think about/through machinima in various ways. We then look at *The French Democracy*, which does indeed involve many ideas relating to the minor, but which also through its specific context and content can help us to rethink precisely what the minor is in audiovisual culture.

What is minor literature? What is minor cinema?

In their *Kafka* book, Deleuze and Guattari argue that a minor literature is one that is revolutionary because it "deterritorialises" the "major" language from within (Deleuze and Guattari 1986). To "deterritorialise" is to make the major language seem unfamiliar, or, as Dana Polan puts it in reference to other work by Deleuze, to make it "stutter" (Polan 1986, xxvii).[2] For example, being a Czech Jew, Kafka's decision to write in German (and not Czech or Yiddish), to construct stories with amorphous characters (K, Gregor Samsa), and to use language in not just representational but poetic ways unsettles German in the same way that a stutterer unsettles and makes us think directly about the nature of the language they are speaking (and which the non-stutterer deploys in an unthinking or automatic fashion). Thus, minor literature makes us both rethink how that major language operates and question its everyday usage by breaking down the easy flow with which language normally communicates.

Furthermore, according to Deleuze and Guattari, a "minor" literature produces solidarity, in that it "express[es] another possible community," and it "forge[s] the means for another consciousness and another sensibility"

(Deleuze and Guattari 1986, 17). In the case of Kafka, we can conceive of this as the construction of a Czech Jewish identity that exists perhaps at the margins of, but also definitely within, the major German-language community. The community of German speakers, then, is not uniform and homogeneous, but one that consists of many communities—both potential and actual—and to produce a work of minor literature is, sticking with the German example, to actualize one of these communities. As such, the concept of the minor is implicitly linked to the future: those people(s) who are to come.

With regard to cinema, the minor is also a means of challenging the dominant modes of representation of a people, and of challenging the tools used to dominate a people (see Deleuze 2005, 207–15). Rather than a monolithic conception of the people, the minor in cinema asks us to reconsider unthinking assumptions about the nature of a people (be it a nation, an ethnicity, a sexuality, or any other kind of group) in such a way that a people is potentially always being redefined/redefining itself, again bringing the notion of futurity to the fore. A minor cinema is thus also a cinema of a people yet to come.

In this way, minor cinema elides the distinction normally maintained between political and private actions. If humans typically understand their actions as individuals to be divorced from their place in society as a whole, this is not the case in minor cinema. Here, individual actions have political ramifications, while wider political trends are also manifested in the individual. For, if "major" cinema treats the people as a given/an a priori and reified thing, then in the minor, the "people" do not exist as such, not least because they have been dominated by the "major" people. Without a stable notion of "the people," the distinction between the individual and the people, the private and the public, breaks down in the minor. Whereas the actions of a people working together for a shared cause are political, so too are the actions of the individual in minor cinemas, since the individual acts within certain socio-political conditions.

If the acts of characters in a minor cinema are both private and political, then the same holds for the minor work itself. That is, even though a work may have only one author, it still can be considered as a *collective* (but not unifying) *enunciation*. The author must debunk not only the myths created about a people by others, but also those myths created about and by the people(s) themselves (and since myths have their roots in the past, this furthers the future sense of a people to come). The author cannot do this by writing, say, an anthropological study of the people which "sets the record straight" in terms of how they are represented/dominated precisely by myths concerning them, but by allowing real characters and situations into a work in order, as Deleuze puts it, to *fabulate*, or tell stories—and not necessarily true

stories—about the people to come. In other words, the boundary between fiction and reality might typically be blurred, and these real/fictional characters/people (or "intercessors") bring themselves closer to the author as does the author take steps towards the characters. This "double becoming," in which author and characters mutually approach each other, such that we are left unsure as to whether it is the author who creates the characters or whether the "real" characters are the author of the work, is what gives to the minor film its "collective" feel.

The minor work exists in an "in-between" state: the myths and clichés about a/the people are not accepted, be they imposed from without and/or maintained by the people themselves. The minor film therefore makes us question the boundary between reality and fiction, and as a result it troubles both the people's own perception of self and how other people perceive them, as well as how intellectuals interpret them. In this sense, using the "major" language becomes important: a minor work is not simply an oppositional work created in a minor language (as one might expect); it is more unsettling than that. The major language is typically appropriated (at least in part) for the sake of what the people is/will become as opposed to enacting a "return" to some "originary" state by using the "old" language. Again, the "major" language is made to "stutter," and a "foreign" language is thereby created *within* the major language, an act that helps to express the impossibility of living under domination.

The minor in film studies

While considering the work of Ousmane Sembène, especially *Borom Sarret* (1966), D. N. Rodowick makes clear how the minor does not necessarily relate to demographic minorities, but to the disempowered and the dominated (Rodowick 1997, 152). For this reason, Deleuze considers filmmakers like Sembène, Yilmaz Güney, Lino Brocka, Glauber Rocha, Pierre Perrault, Youssef Chahine, Haile Gerima, and Charles Burnett in his discussion of the minor in *Cinema 2*.

Furthermore, other scholars have begun to co-opt Deleuze's concept of the minor as a means of conceptualizing various cinemas according to the "national" (Marshall 2001, 2008; Yau 2001; Martin-Jones 2004), gender (Butler 2002), queer (Martin-Jones 2008), and lesbian (White 2008) paradigms. Marshall, Yau, and Martin-Jones's use of the term in relation to Québecois, Hong Kong, and Scottish "national" cinema respectively in particular has strengths, especially in upsetting what it means to be national at all (neither Québec, nor Hong Kong, nor Scotland are fully independent nations).

However, while relevant, this work may also have shortcomings that we shall explore in relation to *The French Democracy*, which from its title alone speaks of the national in a different way (France is a fully independent nation). Before turning our attention to *The French Democracy*, though, let us consider more generally what the minor might mean in relation to machinima. For machinima, being constructed using pre-existing tools from games and virtual worlds, is a form that arguably functions within and subverts the "major" "languages" of cinema, games, and virtual worlds, prior to any overtly political aspirations that an individual machinima may have. In other words, machinima perhaps constitutes a form that is minor by its very nature, and one that uniquely disrupts not one but, arguably, three "major" forms (cinema, games, virtual worlds). Furthermore, since these three major forms seem increasingly to be converging, as witnessed by the construction of animated films and games that use exactly the same engines, machinima truly does become a form that brings out, or helps us to analyze, the potential for political or future cinema in the contemporary era. This potential is only made clearer when we consider Lev Manovich's argument that digital technology renders cinema a subset of animation as opposed to animation being a subset of cinema, such that the "minor" status of "conventional" animation within cinema is also troubled (see Manovich 2001, 302). As we move towards our analysis of *The French Democracy*, then, let us explore these issues.

Machinima as minor... games or cinema?

Patricia White draws a parallel between major/minor film discourses and the format/technology in which they are made. She writes: "If major is to minor as film is to video, feature to short, cinema to television, [and] fiction to documentary, women—and thus lesbians and often transpeople—tend to labour in the latter category of each of these pairs" (White 2008, 410). Replacing White's women/lesbians/transpeople with machinima (and overlooking, for now, the way in which White perhaps draws too clear a distinction between fiction and documentary), we will explore the way in which the minor can be understood through its form, or the technology used to create a film.

First, we argue that, far from being a medium that is separate from film and gaming, machinima is inextricably intertwined with both of these media. Leaving aside virtual worlds for the sake of space, we argue that machinima involves what Jay David Bolter and Richard Grusin (2000) would term a *remediation* of film and computer games. Whether machinima is constructed

in the demo or gameplay modes (that is, whether it is "live" recordings of real gameplay, or whether it is "shot" in the "safe" environment of a game's demo mode), it explicitly refers back to (1) the older media of games and films in the sense that machinima is commonly built using pre-existing game engines (were they not, we would have to consider them as "pure" animations); and (2) cinema in that machinima commonly (if not always) resembles audiovisual narratives, perhaps most particularly when it involves multiple shots of sequential actions, characters, dialogue, and a plot that may or may not have much to do with the game world itself. In fact, this structure is often used for training purposes within a game: a would-be or actual player watches the "machinima" in order to pick up tips and techniques for better negotiating the game world.

As such, machinima is born from both games and films, but it does not conform neatly to either category. Machinima is different from games because, unlike a computer game, many machinima are "scripted" in the filmmaking sense: the players follow set instructions, be they carried out by individuals controlling each of the characters in the scene being shot, or be they carried out by pre-programmed virtual "actors." While it may take several or many takes to get a scene "right," all participants are striving to realize a particular and, importantly, pre-established vision of what *should* happen in the scene—even if, as in a "real" film, the filmmakers work with and often include in their finished work chance encounters or quirks of performance. However, if scripted elements distinguish machinima from games, nor are they necessarily movies, even if many machinima feature narratives that the viewer cannot control (beyond pausing, replaying, or turning off), but must instead follow.

The ambivalent nature of machinima becomes clear when we consider them in relation to indexicality. Nitsche (2005), Cameron and Carroll (2009),[B] and Landay (2009)[C] have noted that machinima often involves live performances by actors that are, in a certain sense, *indexical*: the "camera" records what the actors did and, whether or not a particular take is used in the final film, this cannot be changed (except by using further animation tools in post-production). As such, machinima is "cinematic." Since a "machini-maker" often uses a pre-existing game engine, and therefore cannot or does not take charge of developing every aspect of the *mise-en-scène*, we might say that machinima involves a sort of virtual "location" shooting too, and that it therefore contains perhaps even documentary elements, which become clearer when the machinima is a document of skillful gameplay. However, since machinima locations do not possess any material reality, this renders them unlike films. Given that machinima is made in virtual environments, we might nonetheless call it animation of a sort. However, since much, if not all,

of the *mise-en-scène* is not animated by the "machini-maker," this is not, as mentioned, "pure" animation. In this way, machinima occupies an ambiguous realm between cinema, including animated and documentary cinema, and games, retaining elements of both, but belonging clearly to neither.

Friedrich Kirschner (2011) may feel that machinima has somehow failed to become autonomous from video games, but we wish to make of this "failure" a minor virtue, in that machinima makes "stutter" both gaming and film, which are major and dominant players in the entertainment industry. Blurring the boundary between scripted and improvised work, between indexical and animated elements, and, by extension, between "fiction" and "documentary," we argue that machinima are "minor" films/games (gamefilms?) that disrupt both of these major forms, with forms here displacing Deleuze's original understanding of the minor in relation to language. By challenging established definitions of these forms, machinima forces us to rethink what exactly these forms are. Furthermore, while a game can be played in private, a machinima is made to be seen (even if only by a handful of "insiders"), meaning that the boundary between the private and the collective/public becomes blurred not necessarily *within* machinima, but also *through* machinima. As a result, machinima involves, but also goes beyond, the technological examples Patricia White provides by resisting binary categorizations (film/video, feature/short, cinema/television, fiction/documentary, and now cinema/games). Indeed, this resistance to binary categorizations is in our eyes more proper to the status of minor forms. Minor forms are not oppositional but come from *within* a dominant framework—or, in the case of machinima, from within the two dominant frameworks of cinema and games.

The question of copyright and fair use, long an issue with regard to machinima (see Coleman and Dyer-Witheford 2007; Reid 2009), here takes center stage. Some developers encourage machinima, while others, including those who like fans/players to be creative with their game platform, have had to "ban" certain machinima that do not respect the "rules" of the game. Henry Lowood, for example, explains how Tristan Pope's *Not Just Another Love Story* (2005)[D] was removed from official *World of Warcraft* (2004–present) (*WoW*) forums soon after it was uploaded in spite of Blizzard's usual endorsement of *WoW* machinima. The reason for the "ban" was that the film showed "inappropriate" images (among other things, it intimated fellatio on a troll by a human female), despite the fact that each image that was used was created using only genuine, as opposed to specifically created/falsified, in-game animation (Lowood 2006, 374–80). In other words, Pope's film, which deals with cross-species relationships that the game designers themselves worked hard to prevent, actively seeks to use Blizzard's own engine to disrupt the "meaning" of *WoW*. D. Bruno Starrs (2010),[E] meanwhile, sees

the popular *Red vs Blue* series (2003–present)[F] as being an anti-war movie, in that it mocks the banality of war through the *Halo* (2001) series, which itself is based on intense first-person shooter (FPS) action. In both cases, then, the "stuttering" that is involved, which is to say the use of in-game images to create a meaning beyond their original context, not only "speaks the major language" of gaming in a minor way, but also seeks to throw off the dominant (divisive and combative) ideology of the game designers. As such, these machinima may also be deemed to represent a people to come. And if they disrupt the "major language" of gaming, these and many machinima like them also make the "major language" of cinema "stutter." This is not so much because many machinima seem to want to mimic the "major" style of conventional/Hollywood filmmaking (evidenced by the adoption of continuity editing techniques in many machinima), nor because they use a game engine paradoxically to make a movie (suggesting that movies hold a cultural cachet over and above games). More importantly, it is because machinima blur any clear fiction/documentary boundary by involving both scripted, indexical, and improvised elements, as argued above. As a result, machinima disrupt stable notions of cinema.

Recalling Manovich's inverted relationship between animation and live action cinema thanks to digital technology (within cinema, live action becomes a subset of animation, not vice versa), we may argue that digital animation has already begun to upset the "major" discourse of (live action) cinema. Furthermore, since games and animated films can be and are created using the same engines (for example, Robert Zemeckis's 2007 film, *Beowulf*; see Brown 2009), we might argue that these two forms are already disrupting each other as much as they are, to use Henry Jenkins's (2006) term, converging. Is machinima, then, as a hybrid of games and cinema, including animated cinema, simply an upshot of a major trend in cinema as a whole, and which is far from being minor? Namely, is animation moving from the wings to the center of the film production process thanks to the same advances in computer technology that have enabled the gaming industry to rise to its dominant position? In this sense we may also ask: is a film like *Beowulf* in and of itself a kind or a cousin of machinima since it is a film made using an engine that has also been used to create a game?

If we earlier mentioned that many "machini-makers" seek to employ the tropes of mainstream filmmaking (which we will generalize here as continuity editing), then we should emphasize that in fact many do not, be that by design or through a lack of "skill." Leo Berkeley uses the work of Pierre Bourdieu to propose that "the struggle of the machinima community [is] to break from the marginal position it occupies in relation to the Hollywood system through a contradictory mixture of rebellious rhetoric and big studio

hero worship" (Berkeley 2006, 68). We take issue with this position and argue that, regardless of the professional ambitions of many "machini-makers," much of the disrupting/subversive power of machinima derives from its "amateur" status, for which Deleuze's concept of the "minor" emerges as a more appropriate framework than does the work of Bourdieu. Both *Not Just Another Love Story* and many early episodes of the *Red vs Blue* series involve "primitive" aesthetic values in terms of image quality, quality of acting, and quality of editing, such that these are not so much defects as *defining characteristics* of machinima, regardless of the machini-makers's intentions. Lisa Nakamura has argued that Henry Lowood does little to engage with machinima on an aesthetic level (Nakamura 2009, 155),[G] but it is precisely on this aesthetic level that we would like to reappropriate machinima as a minor form.

In contrast to *Beowulf*, the amateurish aesthetic of much machinima is also its virtue. To clarify this, we will compare *Not Just Another Love Story* to a recent professional machinima, *Red Dead Redemption: The Man from Blackwater* (2010),[H] made by John Hillcoat, the director of such films as *The Proposition* (2005) and *The Road* (2009). Hillcoat's machinima is in certain senses a "major" film used to promote Rock Star Games's *Red Dead Redemption* (2010), although one might still argue that, simply by virtue of being a machinima, *The Man from Blackwater* disrupts, or makes stutter, both cinema and games, and therefore retains an element of "minority." Meanwhile, *Not Just Another Love Story*, in spite of the fact that on many levels it "promotes" Blizzard's *WoW*, is more obviously an amateur film that, as mentioned above, subverts the protocols of, or plays in a "minor" key, the game used to create it. As Patricia White says of the minor lesbian film, machinima similarly implies "the substandard, the trivialised, the dismissed, the real chance that minor work expresses not only a 'willed poverty' but also underfunding" (White 2008, 414). In other words, while all machinima arguably make both games and cinema "stutter," this "minor" quality (or the subversive power) of machinima is made most clear when the movies are willfully amateurish.

Much scholarship on machinima emphasizes its subversive or oppositional potential (Coleman and Dyer-Witheford 2007; Picard 2007[I] Horwatt 2008;[J] Jones 2008; Reid 2009;[K] Starrs 2010). This is true enough, but it overlooks the way in which open subversion and direct opposition are often prey to reinforcing precisely that which they seek to overthrow. The minor must—and, we argue, much machinima does—seek a more ambiguous *modus operandi*: it does not simply speak another language; it speaks the "major" language in a minor way by employing amateurish or "bad" filmmaking techniques. This is why we argue that machinima is not an entirely new medium, but a complex

and "minor" manifestation of both gaming and cinematic forms, a "bilingual" and/or "creole" form that also "speaks" its own "language," that of a people to come. As such, we agree with machinima's "founders," Hugh Hancock and Paul Marino, in stressing the *futurity* of machinima (see Hancock and Marino 2004; discussed in Bates and Bruce 2010),[L] a futurity that Hancock (2011) continues to emphasize in speaking of its ongoing potential. Sarah Coleman and Nick Dyer-Witheford similarly argue that the "dot.communism" of practices like machinima, which makes of game engines a "common" property, suggests "no anachronistic remnant of fading hacker culture, but rather a premonitory avatar of some yet-to-emerge 'commonist' mode of production" (Coleman and Dyer-Witheford 2007, 948). But where Coleman and Dyer-Witheford wonder, after Antonio Gramsci, that "commonality" might not be able to be born, we argue with regard to machinima, particularly in its activist and willfully "minor" mode, that its futurity, its to-come-ness, is similarly what helps to define it (albeit ambiguously). Machinima as a form is defined, like the minor peoples in Deleuze's work, by the impossibility of its autonomy ("machini-makers" can never own the rights to their work since they appropriate images and sounds from other sources, not just game engines, but also pre-existing music soundtracks, the legal rights to which may remain forever beyond their means).

The French Democracy

Alex Chan's film was made using Lionhead's game, *The Movies* (2005), which "simulates the history of Hollywood: the game's advertisements invite players to use the built-in machinima capacities to recapitulate the exploits of moguls from DeMille to Spielberg" (Coleman and Dyer-Witheford 2007, 943). Robert Jones (2008, 975) suggests that increasing numbers of software titles, including Reallusion's *iClone* (2006) and Moviestorm Ltd's *Moviestorm* (2008), seem to encourage the making of machinima. *The Movies*, which is a game as opposed to software, does likewise. As such, it is possible to challenge the idea that machinima made using *The Movies* is "minor" at all, since it is one of the "major" uses of the game. However, if such recent developments suggest the "becoming major" of machinima, then the directly political (mis)appropriation of *The Movies* to make *The French Democracy* reinvigorates machinima as a minor method. That is, while it might be ever harder to uphold machinima as a "minor" form, in that recent developments constitute its becoming a major form in its own right, it seems to be an appropriate form with which to make a film that represents an actual (and not just a virtual) "people to come."

The machinima adopts the perspective of French suburban rioters in 2005, highlighting the ways in which many second- and third-generation French North Africans feel misrepresented by the mainstream French media, and disempowered and rejected by mainstream French society, to such an extent that they embrace their marginal status, violence, and criminality to articulate their own subjectivity. The film is already considered a crucial development in the history of machinima (Coleman and Dyer-Witheford 2007; Lowood 2008), even if Robert Jones (2011) feels that the film is limited in terms of its production and reception. However, when considered from the perspective of the minor, we argue that *The French Democracy* grows in subversive power *precisely through* these very limitations.

In 2005, the future French president Nicolas Sarkozy outraged citizens, particularly those impoverished and predominantly ethnic French people in the suburban housing estates known as *banlieues*, by saying in two different public statements that these elements of French society should be swept away with a *Kärcher* (a make of power hose), and that they were *racaille*, or "scum" (see Hargreaves 2007, xvi). Soon after, two young *beurs* (or French people of North African origin) died in an accident at an electricity station while evading police officers. The police, who at the time were known for unduly harassing *beurs* seemingly on the basis of their ethnicity, were widely blamed, and the response involved widespread riots. While the media condemned these riots (as is shown in *The French Democracy*), Alex Chan sought to demonstrate how the riots were merely a backlash against, and thus a symptom of, much more widespread racial tension in France, the predominant victims of which were minority ethnic youths.[M] In the machinima, we see various ethnic characters who function as what Deleuze terms "intercessors," since we skip from one character's narrative to the other without really seeing—until perhaps the end—how they are united. We see these characters being arrested without reason, being turned down for jobs on account of their perceived lack of "Frenchness," and other aggravations that lead to a sense of hopelessness, which in turn leads to violent outrage.

These minority ethnic youths, who often do not personally know the countries from which their ancestors came, struggle to form a coherent identity within France. If to be "minor" makes a virtue out of poverty, however, "minority ethnic youths in France have [similarly] sought to turn the tables on their detractors by inventing their own counterdiscourses" (Hargreaves 2007, xvii). Hargreaves offers as an example the fact that minority ethnic youths take terms like *racaille* and invert them (using back-slang known as *verlan*), thereby making them their own, hence the term *caillera* (*racaille* with the syllables inverted). When first articulating the concept of a minor

literature, Deleuze highlights an appropriation of language, or the creation of new relationships of meaning from within a dominant discourse, similar to that of minority ethnic youths in France; that is, Deleuze speaks of "what blacks in America today are able to do with the English language" (Deleuze and Guattari 1986, 17) as an example of "minor" discourse. Contrary to Hargreaves's concept of "counterdiscourse," then, we should like to propose, after Deleuze, that *verlan* is a "minor" discourse.

Azouz Begag, a sociologist and France's first minister of North African origin, writes that "they [*beurs*] began to champion these spaces [the *banlieues*] as territories in which they could assert their autonomy and thirst for survival" (Begag 2007, 40). Since these spaces exist outwith mainstream French society, Begag calls them *virtual*, and he emphasizes the ways in which *beurs* are offered little social mobility in France. With regard to *The French Democracy*, it is apt that the film should use a virtual space (a digital environment taken from the game engine of *The Movies*) to show a space that is precisely virtual in Begag's terms.

Furthermore, the fact that there is little or no social mobility for minority ethnic youths in France is similarly reflected in the virtual nature of the film. While the machinima moves very quickly (in the sense of being edited with very rapid cuts), so quickly as to be hard to follow at times—arguably a "flaw," but also in keeping with the "amateur" aesthetic so important to a minor film/machinima—it is also a digital movie made up of fixed pixels that change color, and in which there is therefore *no real movement* at all. In other words, not least in a film that seeks to address the failure of the French media accurately or fairly to cover the plight of these minority ethnic youths, the very impossibility of movement, the impossibility for these people to make themselves visible as flesh-and-blood human beings (they are instead digital characters), is conveyed in an appropriate manner. Since it is impossible for them to be seen as human beings, why not use digital avatars and sets to bring home precisely the struggles that minority ethnic youths face in France?

The Movies is similarly an apt choice of game engine for *The French Democracy*. Olli Sotamaa (2007) argues that *The Movies* functions in such a way that one can never escape the boundaries on machini-making that the game imposes; one has to follow the game's rules rather than genuinely create. Robert Jones (2008) has spotted as much in *The French Democracy* when he says that the virtual spaces which ostensibly represent the Paris Metro look remarkably like the New York Subway, precisely because these were the closest virtual sets that the game had to offer when Chan made his film (Jones does not spot that one of the houses in the film also has an American flag draped outside its door). However, while machinima itself may already be an appropriate form to represent a people to come, since

the virtual nature (in the film) of these actual people (in real life) serves to heighten the impossible conditions for self-expression in which they find themselves, *The Movies* seems an even more appropriate choice than a machinima made in, say, *WoW*. Not only does *The Movies* make us think of the limited ways in which minority peoples are represented in mainstream media/films, but this is visible in the film itself: the game cannot represent the Paris Metro, only the New York Subway. Chan, however, turns this to his advantage, using a "major" cinematic setting to bring to the surface the impossibility of accurately representing the marginal *banlieue* spaces from which his protagonists originate. If the *banlieue* cannot be shown, then what the *banlieue is not* will be emphasized as much as possible; hence the permitted presence of the American flag.

In both form and content, then, *The French Democracy* is a work of "minor" filmmaking *par excellence*. Cristina Johnston argues that in the French context a "minority cinema" makes no sense "if there is no norm against which to offer such a categorisation" (Johnston 2010, 17). Although Johnston mentions Deleuze, she specifically avoids the term "minor," preferring "minority" instead. Nonetheless, *The French Democracy* indeed proves its minor credentials in relation to the "norms," or what we here term the "major" languages, of cinema and gaming. By exposing the limitations that *The Movies* has in representing non-American spaces, *The French Democracy* disrupts gaming, while the film's amateur aesthetic also disrupts the "major" language of cinema. It also disrupts or "makes stutter" the "major" news coverage of the *banlieues* by featuring virtual broadcasts about the riots that recall the blurring of boundaries between news consumers and creative "amateur" reporters, not so much in terms of what happens in the film, but in terms of the film itself. Although not an indexical documentary of the 2005 riots, *The French Democracy* is still a (paradoxically) fictional documentary that uses a form (machinima) associated predominantly with fiction to convey news (see also Russell 2007). This finally brings to the fore another "major" practice that is disrupted by machinima and new media more generally: namely the shift in roles from straight consumer to producer of media as enabled by new media technology. The "prosumer," as it were, is similarly a "people to come," the amateur who "makes stutter" the major news coverage and audiovisual production carried out by the supposedly bona fide professionals. As such, Begag is perhaps overly critical when he sees minority young ethnics being transformed into "mere consumers" (Begag 2007, 96) by the dominant ideology in France. Chan's film serves to show that the amateur prosumer challenges these supposedly pre-established roles and definitions set aside for them.

Future directions: from minor to multitude

If machinima is a form that is minor, it is also a form that risks "becoming major," or which is "growing up" (Fosk 2011)—even if machinima cannot at present compete with high-end CGI films in terms of "quality" (Falkenstein 2011). Nonetheless, machinima is becoming increasingly recognized and accepted by the mainstream (including academia), as *The Man from Blackwater* and the increasing number of publications on machinima make clear.[3] *The French Democracy* shows, however, that one can still make a "minor" work about a "people to come," not just in spite but also because of the limitations of a mainstream and machinima-friendly game like *The Movies*; not just in form but also in content—something that arguably makes *The French Democracy* a more profound work than the other machinima mentioned here. However, *The French Democracy* can also unsettle or "make stutter" Deleuze's concept of the minor itself—and in conclusion we should like briefly to suggest "future directions" of thought in relation to machinima.

We mentioned earlier the way in which much work on the minor in film studies involves "national" cinemas (Québec, Hong Kong, Scotland). David Martin-Jones even suggests that the minor is predicated solely upon the creation of a "new type of *national* identity" (Martin-Jones 2004, 229; emphasis added). While Québec, Hong Kong, and Scotland might all legitimately lay claim to an autonomous (if impossible) national identity, the same is not true for minority ethnic youths in France. While the post-colonial movement in, and more particularly against, France was founded on the creation of a national identity, this no longer holds. Minority ethnic youths *are* French and want to be French, as Begag implies when he says that they are "far less preoccupied with the legacy of the colonial period. They know less and less about the history of immigration in France and overseas colonisation" (Begag 2007, 94). But the French that they want to be is not the reified national identity peddled in the mainstream media. Nor are their claims to an identity based on a pre-existing concept of a nation, even if that nation is not now/never has been autonomous (they do not proclaim themselves as, for example, Algerians). Theirs is a truly "minor" discourse, as reflected in *The French Democracy*'s very title—its emphasis being on Frenchness. The film seeks not to create a new identity, but to disrupt and to make stutter French national identity. Minority ethnic youths are themselves a people, or, better, peoples to come,[4] but they also highlight the way in which progress will not be made by counter-reifying France and Frenchness, but by allowing it, too, to become, to take on an element of futurity.

Michael Hardt and Antonio Negri argue against the term "the people," saying that the people rule in all situations, including a monarchy: "The

people […] tends toward identity and homogeneity internally while posing its difference from and excluding what remains outside of it […] the people is a constituted synthesis that is prepared for sovereignty" (Hardt and Negri 2000, 103)—sovereignty here being the equivalent of domination. The people are contrasted by Hardt and Negri with the multitude, which is "a multiplicity, a plane of singularities, an open set of relations, which is not homogeneous or identical with itself and bears an indistinct, inclusive relation to those outside of it" (Hardt and Negri 2000, 103). While this definition of multitude may in fact overlap with what Deleuze intended to make of "the people," it seems, in Deleuzian discourse at least, that the people has lost its power, and has become defined by oppositional national identities that do indeed claim internal homogeneity while being different from outsiders. This is not the "minor" as Deleuze defined it, which must, like Hardt and Negri's multitude, be internally heterogeneous. Furthermore, and unlike Deleuze's definition of the minor, but something that arguably we can see both in the reading of *The French Democracy* put forward here and in Begag's consideration of ethnic minority youths in contemporary France, the concept of the multitude has an *inclusive* relation to those outside of it. Begag and Chan show minority ethnic youths who are French and who want to be French (get jobs, not get hassled by the police, etc.). They have been rejected, but a minor cinema can become a multitudinous cinema when not simply a counter-rejection takes place, but a brave decision to embrace "others"—when possible, even to embrace those who have excluded them. To embrace "others" would be properly to blur the boundaries between insiders and outsiders. To suggest not just a minority people to come, but a multitude.

Notes

1 Katie Salen (2010)[N] seems to be the only scholar to have mentioned the work of Gilles Deleuze in connection with machinima. However, she only briefly mentions Deleuze's concept of "stuttering" from *Difference and Repetition* (1994) in a head-quote, and does not otherwise return to the idea.

2 In a subsequent essay on "stuttering" and the "minor," Deleuze says that writers like Kafka and Samuel Beckett, an Irishman writing in French, "invent a *minor use* of the major language in which they express themselves entirely; they *minorise* this language… they make the language take flight…. This exceeds the possibilities of speech and attains the power of the language, or even of language in its entirety. This means that a great writer is always like a foreigner in the language in which he expresses himself, even if this is his native tongue. At the limit he draws his strength from a mute and unknown minority that belongs only to him. He is a foreigner in his own language: he does not mix another language with his own language, he carves out a

nonpreexistent foreign language *within* his own language. He makes the language itself scream, stutter, stammer, or murmur" (Deleuze 1998, 109–10; emphasis added).

3 Provided, that is, that machinima have not always in fact been mainstream. Hugh Hancock (2011) suggests that white, middle-class men between ages 14 and 45 are machinima's main demographic, making films like *The French Democracy* even more salient (and even more "minor") in using machinima to address political issues such as race and class.

4 If there is not a people, but instead peoples to come, Jones (2011) is perhaps correct to criticize *The French Democracy* for not dealing in enough depth with the divergent "subaltern group members" that exist among marginalized Parisian suburban dwellers.

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2

Beyond bullet time

Media in the knowable space

Chris Burke

"What do you consider the largest map that would be really useful?"
"About six inches to the mile."
"Only six inches!" exclaimed Mein Herr. "We very soon got to six yards to the mile. Then we tried a hundred yards to the mile. And then came the grandest idea of all! We actually made a map of the country, on the scale of a mile to the mile!"

CARROLL 1893, 169

Anyone who has ever played an immersive videogame has probably had the desire to wander away from the plot and deliberately seek out the aleatoric, the odd detail off the beaten path. We drift away from the string of

pearls and into the less graphically sophisticated underbrush, or even out of the bounds of the map altogether. There is something thoroughly compelling about these pointless excursions through numerical space. But what is it we are looking for?

In a videogame, as in other media, details of scene and character are what make the world more believable. Of course, finding a key, a weapon, or other inventory item that has been placed in such a way as to be easily found hardly enhances immersion. But the small, non-essential detail can far better evoke a real space. The armadillos and other creatures that run through the brush in *Red Dead Redemption* (2010) give the player an uncanny feeling. We wonder where they go after we see them. Similarly, when the drop ships in *Halo* (2001) have done their job and fly off to the far reaches of the map, what happens to them and their flight crew?[A] Do we ask ourselves these questions because we want to reinforce the verisimilitude of the game world? Or is it something else that these details tell us about game space?

French psychoanalyst Jacques Lacan defines "the real" as that which cannot be represented. It loses its reality once it is symbolized through language. It is "what resists symbolization absolutely" (Lacan 1991, 66). If Lacan is right and "the real" is that which resists representation, then media is a potentially fruitless attempt to make sense of existence through the use of ever more sophisticated technology. Maybe the "sideways" drift of the wayward gamer described above brings the real target into focus. We jump at the chance to do what we could never do in any other medium—to drift aimlessly away from the story in the hope of stumbling upon something useless or broken that exposes the uncanny nature of a numerically defined virtual space in which reality has *not* been captured, but where, with our "sideways" steps, we gradually become aware that something important in the mediation of our world has changed. The experience of game space is as far from the experience of space in moving pictures as that experience was from the written word.

If the real ultimately resists representation and is therefore unknowable, then perhaps in games we have instead created a new, knowable reality, quantifiable in the most exact ways. Gone is the ghostly stasis of the still photograph and the fragmented space of film, rebuilt upon each viewing by the brain but never penetrable. In the virtual spaces of videogames, we have managed to abstract not just image and sound for manipulation, but space-time itself. And by extension, machinima presents us with a set of tools that leverage this new, highly plastic way of mediating our world, an understanding of which will greatly benefit us as visual artists.

Cinema and representation of the real

To understand the nature of this paradigm shift, I look first at the history of cinema and its underlying theories of realism. Much has been written about the so-called Lumière/Méliès dichotomy. It has been argued that the Lumière brothers, like Thomas Edison in the United States, were mostly concerned with demonstrating the mimetic qualities of the new medium. Most of their films seemed content to present the everyday on a screen to an audience, beginning with simply documenting workers leaving their factory (*La Sortie des usines Lumière à Lyon*, 1895)[B]. On the other hand, Georges Méliès, a French stage magician, saw in the cinématographe the power of illusion. One can argue the extent to which the Lumières truly represent naturalism and Méliès magic or fantasy, but the general disinclination/inclination to alter the image to mediate space-time is clearly delineated in the techniques of these early filmmakers. The Lumières were interested in replicating the space and time of the film location. Méliès favored the exploitation of a psychological effect to synthesize a different space and time in the mind of the viewer. His films frequently employed techniques such as the "stop trick"—stopping the camera, substituting or shifting the subject, then continuing shooting—which resulted in objects and people appearing to pop on or off the screen like magic.[C] Of course, film itself is an optical illusion. The tricks work in part because of the optical phenomenon known as persistence of vision (Mast 1981, 8). The human brain retains images slightly longer than the eye sees them, resulting in a more fluid perception of visual stimuli. Because of this, we perceive the discontinuous, two-dimensional images in a film strip as one continuous image that moves. While the films of the Lumières also relied on persistence of vision, it was in the service of more realistically representing the natural world. To Méliès, the phenomenon was exploited to mediate that representation and create something unnatural.

The naturalist tendencies of the Lumières and the more plastic approach of Méliès remained a somewhat benign division until the 1920s with the groundbreaking "montage theory" of Russian directors Sergei Eisenstein and Dziga Vertov. In Eisenstein's view, meaning in cinema comes from the synthesis of ideas contained in individual shots or "cells," which "collide" to create a mental image of the filmic space (Eisenstein and Leyda 1949, 4). Spatial and temporal continuity was not a concern for Eisenstein as film was an essentially dialectical art in which conflict was paramount. Around the same time, Soviet director Lev Kuleshov provided evidence for this dialectical relationship between shots with what came to be known as the Kuleshov effect.[D] Alternating a shot of an actor's expressionless face with shots of a bowl of

soup, a young woman, and a coffin, he demonstrated that audiences would read hunger, desire, or grief respectively on the actor's face, depending only on the order of the shots (Mast 1981, 152). Like Méliès, the Russians were interested in manipulating perception to create their own filmic space-time.

The film theorist Rudolph Arnheim observed in the early 1930s that film excelled in "the mechanical imitation of nature" (Arnheim 2006, 158). Perhaps the most persuasive writings from the realist approach came in 1945 with André Bazin's *The Ontology of the Photographic Image*, in which he explains that photography and cinema allow a previously unimaginable level of mimesis in the reproduction of reality: "The aesthetic qualities of photography are to be sought in its power to lay bare the realities" (Bazin 1960, 8). The hallmarks of Bazinian realism in cinema are the long take, limited editing, and deep focus shots. At the same time, the Italian neo-realists such as Visconti, Rossellini, and De Sica were writing about and making films with a similar approach (Bondanella 1996, 32).

Again, one can debate how far apart Bazin's realism was from Eisenstein's montage. Both were attempting the portrayal of real space through differing approaches. However, for Bazin, filmic images were transparent. We look *through* them to see a moment in time and space which is "mummified" (Bazin 1960, 8) by the process of cinema. The space exists as it did in reality at the time it was shot and is perceived as such through the image. Eisenstein was interested in synthesizing the real in celluloid. To him, images were opaque. They were the reality itself. Or, rather, the collision of the shot cells *created* a reality. Another way to look at this dichotomy is that Bazinian space and time are *captured* while for Eisenstein they are *synthesized* through montage (Eisenstein and Leyda 1949, 45).

In the 1960s, the French New Wave saw a number of directors who had been influenced by both sides of this argument. Robert Bresson, who had been championed by Bazin as exemplifying cinematic realism, was also experimenting with montage techniques in such films as *Pickpocket* (1959), which famously made use of the Kuleshov effect.[E] Jean-Luc Godard, Bazin's protégé with the film magazine *Cahiers Du Cinéma*, was a proponent of *cinema verité*, a type of realism distinguished by handheld camera work, non-actors, and improvised dialogue. Godard's work is instructive in that it combined the somewhat Bazinian, *verité* approach with intrusive elements that broke the illusion, bringing a sort of updated Eisensteinian plasticity into play. Godard deliberately damaged the film strip, discussed his filmic technique in voice-over, directly addressed the audience, and employed a number of other tricks to draw attention to the actual production of the film (Lapsley and Westlake 1989, 192). Interestingly, Godard's "truth" was not about convincing the viewer of the veracity of the story so much as exposing the real process of

cinema, in a sort of cinematic take on Brechtian alienation. Godard's realism is that of the film set, with actors, artifice, illusion, and authorial subjectivity intact. He speaks through a character in his film *Le Petit soldat* (1963): "Photography is truth. The cinema is truth 24 times per second."[F] On the one hand, Godard is embracing Bazinian cinematic transparency, but on the other he is making a very telling allusion to the mechanical process. If there are 24 truths in each second, can there be any single truth?

The knowable space

The birth of videogames is closely tied to mathematics. Possibly the first electronic game, Raymond Redheffer's *Nim* (1942), was developed in the early 1940s and exhibited at a Mathematics Department open house at the Massachusetts Institute of Technology (MIT) in 1950.[G] Redheffer's game was in good company at the MIT open house with møbius strips and flexigons, both models exemplifying the idea that certain properties are invariant under certain kinds of transformations, an area of mathematics known as topology (the study of geometric properties and spatial relations that are not affected by certain types of deformation) and subsequently central to the development of videogames.[H] Topologies exist to make complex properties quantifiable.

A modern videogame is thus a complex set of geometries that forms a three-dimensional map of space. It is worth noting that in mathematics, virtual space and real space are treated equally. Both are quantifiable with exactitude. A level map of a first-person shooter, for example, is defined in code using vector and matrix mathematics. The vertices and other data that make up the space are then parsed by binary space partitioning (BSP) software in order to render the space efficiently. The BSP accesses the topology of the map and uses a data tree to store the information.

Virtual space is, of course, yet another mediation of our world. Not unlike film, video, or, for that matter, the written word, it attempts a certain verisimilitude to actual space. We understand our world in three dimensions, and so virtual space models usually have an "x," a "y," and a "z" axis. But because this is mathematically mediated space, it is fundamentally different to film space or space described in literature. The quantifiable nature of virtual space affords it a topological advantage over previous media. Currently, that advantage is traded for a less photorealistic appearance, though, with the verisimilitude of game engines advancing so rapidly, it is not hard to imagine future games in which the differences will become trivial.

Thus far, we have been concerned with representations of the real in film. Let us consider now some differences between the mediation of virtual

space in an immersive videogame and the space-time of film. The first and most obvious difference is the advent of user agency or interactivity. Like film, most videogames are played by looking at a flat screen. Immersion in a videogame comes almost entirely from the user agency of the controller. The fact that one controls one's own point of view separates the experience of a videogame from that of cinema, in which there is only the inertia of the seat in the cinema and subservience to the cinematographer's or director's choice of shot. In a videogame, space is not simply watched—it is engaged.

Film theorist Christian Metz (1974, 8) and other scholars suggest that movement is what best suggests the real. Another way to say this would be that motion enhances immersion. A still photograph carries potential for a certain type of immersion. Some aspect of the real seems to have been captured, but it is actually frozen in time, causing what Roland Barthes called "the illogical conjunction of *here* and *then*" (Barthes 1978, 44; emphasis in original). A motion picture, on the other hand, can invoke a fairly strong feeling of immersion, helped along, as it is, by the powerful effect of motion in the image. But a case can be made that user agency is an even stronger trigger for such immersion. Some game scholars suggest that this is due to the "ergodic" nature of videogames—they must be engaged rather than simply watched (Aarseth 1997, 95). One might suggest that the subjective camera tracking shot in cinema is akin to immersion in a first-person videogame, but it still lacks the important distinction of user agency. The fact that the game controller allows the user to make his or her own choices about which part of the space to look at and traverse makes the experience of space in a videogame unique in media.

Second, space-time in a film is filtered through a process of fragmentation and reassembly. The actual location and moment in time are fragmented by the choice of camera angle, length of the shot, time of shooting, etc. The footage is then further fragmented in the editing process. In the case of montage, there is an intention to create a new space in this process via "collision" or juxtaposition of shots. But, most importantly, upon projection the space is reassembled in the brain of the viewer. The viewers are given mediated fragments—Godard's 24 truths per second—from which to synthesize in their minds a sense of space and time.

On the other hand, space and time in a videogame are not represented so much as simulated. They are modeled mathematically and their constituent parts exist as topologies so that aspects of the medium, such as camera angle and movement, are given over to the agency of the user. When a projector is shut off, the film space ceases to exist, having relied on the viewer's perception to piece it together. When a videogame console or computer is shut off, the space still exists in a crucial sense, relying as it

does on the digital code that quantifies it. Our presence or absence makes no difference to the space itself.

Finally, the third and the most important distinction in the way videogame technology mediates space-time as compared to cinema is that videogames, as game designer and theorist Ian Bogost writes, are "procedural," i.e. "[t]hey model the behavior of systems, and allow players to interact with those systems" (Bogost 2009).[I] Whereas film presents us with a series of moments in time and space, videogames allow for interactive access to the space, wherein the behaviors of the system, such as visual appearance, physics, social constructs *etc*, can be experienced in real time through the process of agency. In an influential article, game designer Gonzalo Frasca argues that videogames "should not be viewed as an extension of narrative, literature, theater or cinema" (Frasca 2001, 1). His central and controversial point is that videogames, as simulations, are ontologically different from representational media. He offers the example of the kaleidoscope, which "should not be understood as a collection of possible images but instead as a device that produces images according to certain mechanics" (Frasca 2001, 2).[J] Similarly, videogames, being procedural models or simulations, present not just a narrative but a set of interactive possibilities, set in motion by the player's actions, any of which may be seen as, or made into, a narrative. It is this aspect of videogames that makes machinima possible.

Viewed in this historical context vis-à-vis photography and cinema, videogames arguably mark the moment in human history when we tired of the opacity of previous forms of media and their inability to represent the real. It is the moment when we came to terms with Lacan and moved from representation to simulation. We changed the rules after understanding somehow that no matter how much emphasis we placed on realism or naturalism, our inner Bazin would always fail. Rather than mimic spaces that were unknowable in the Lacanian sense, we created a new, knowable space—quantifiable, exactable, and highly plastic.

Two examples

Let us look at two examples to further examine the ontological difference between the representation of space-time in cinema and its simulation in video games.

The first example to consider is the filmmaker's struggle with the limits of Bazinian realism in Michelangelo Antonioni's *Blow Up* (1966). Based on Julio Cortázar's short story "Las babas del Diablo," *Blow Up* won the Grand Prix at

Cannes in 1967. The story revolves around a young British photographer who, while taking pictures of a couple in a London park, accidentally captures on still film what he believes to be evidence of a murder. The dramatic center of the film is the blowing up of the images in an attempt to make visible a possible gunman in the bushes and a dead body in the grass. In these scenes, we see a series of successively grainier images hung on his wall which he examines with a magnifier. It is left unclear as to whether or not the images present actual evidence.[K]

Antonioni's work was highly informed by Bazin, the neo-realists and the French New Wave, and his cinematic approach to realism was groundbreaking (Bondanella 1996, 225). Like Godard, he was interested in the extent to which motion pictures could capture "truth," but unlike most filmmakers of his day, his films seem to argue against such a "transparency" of the image. As Antonioni wrote in an essay several years before *Blow Up*:

> [d]uring the post war period there was a great need for truth, and it seemed possible to photograph it from street corners. Today, neorealism is obsolete, in the sense that we aspire more and more to create our own reality.
>
> ANTONIONI 1996, 62–3

Film scholar Asbjørn Grønstad contrasts Antonioni's approach with Bazin's ideas, suggesting that it "reveals not only the materiality of film, but, more importantly, the attendant opacity of its images" (Grønstad 2004, np).[L] In demonstrating the limits of the photographic image's ability to represent the real, Antonioni is directly grappling with the core issues of realism and, one could argue, taking photographic representation as close to simulation as is possible. Consider the extensive rambling scenes in the film. Wandering into a club, Thomas (David Hemmings) watches a performance by the English pop group The Yardbirds, during which Jeff Beck smashes his guitar. Thomas fights with others in the crowd for the pieces and exits the club victorious. But he immediately tosses his prize onto the sidewalk and wanders off, underlining the complete lack of narrative purpose in the scene.[M] These purposeless scenes are also present in many of his other films, such as *L'eclisse* (1962) (the character Vittoria wanders through a suburb of Rome, although it may equally be said that she is wandering through the narrative itself, as her encounters make up the loose plot) and *La Notte* (1961) (the character Lidia similarly rambles aimlessly through Milan). They work as a sort of cinematic *dérive* through the film's landscape, as if the director was exploring the space of the film in the hope that the real would be somewhere in the aleatoric details.[1] Much like the gamer's pointless excursion away

from the plot described in the introduction above, Antonioni's photographer stumbles upon situations that have no diegetic purpose whatsoever. Rather, the aleatoric is sought by the filmmaker in order to foreground his search for the real in the space of the film. Antonioni talks about this process:

> The camera hidden behind a keyhole is a tell-tale eye which captures what it can. But what about the rest? What about what happens beyond its field of vision… make ten, a hundred, two hundred holes, install as many cameras and shoot miles and miles of film. What will you have obtained? A mountain of material.… Your task will then be to reduce, to select. However, the real event also contained these aspects, it had the same marginal details, the same excess of material. By making a selection you are falsifying it. Or as some would say, you are interpreting it.
>
> quoted in BONDANELLA 1996, 222–3

However, if one were to think of the film as a simulation of space—as it might be in a videogame—the results would be dramatically different. Imagine a digital avatar of Antonioni's photographer exploring the sandbox environment of a game space. Theoretically speaking, as a simulation, the medium itself would not pose the sort's of impediments to discovering the evidence that the grainy photographs did in *Blow Up*. It would simply be a matter of finding the park and looking in the right place for the body. In addition, because videogames are topological by nature, one can imagine shifting into replay or "theater mode" after the moment when the photographer takes the incriminating pictures. One could then explore the bushes, for example, to see whether or not a murderer was hiding there. Not that typical gameplay incorporates this function—it is used primarily to show off achievements via playback and for making machinima—but its existence further exemplifies the critical difference between videogame space and film space. Whatever is in the bushes is part of Antonioni's "excess of material" that was present in the real space, as is the guitar and whatever else the wandering character (and Antonioni's camera) comes upon. In a videogame, the author makes no selection from the "material" presented because there is no excess. There is only what has been programmed. Aleatoric details like the armadillos in *Red Dead Redemption* (2010) delineate the depth of the modeled system but there is no need to freeze these moments for the player. A full cognizance of the space is possible without authorial selection and is aided by features like "theater mode." If Antonioni's aim was to push filmic representation to suggest the impossibility of capturing all of this excess material, in a videogame there is no such frustration. A system is modeled and the exploration is given over to the player.

My second example from cinema is *The Matrix*, directed by Lana and Andy Wachowski and released in 1999. In a futuristic scenario, humans find themselves living in a simulated reality created by sentient machines. The film famously exploits a photographic effect known as "time slicing," in use since at least the 1980s[N], to create the film's signature effect that the Wachowskis dubbed "bullet time" (*Empire* 2006). The effect is achieved by placing still cameras in a formation around the subject and firing them either sequentially or simultaneously. The resulting images are then stitched together in editing to create an orbiting view of the action in slow motion.[O] In the film, this effect was used particularly to visually demonstrate the characters' abilities to manipulate time and space with their minds.[P]

One of the striking things about bullet time is that it slows down or stops diegetic time while allowing spectator time to continue unchanged. One of the primary ways we experience time is through physical change, usually manifested by movement. When movement freezes in the bullet time sequences, our experience of the space through the continued camera movement does not stop. In this sense, space is untethered from time. It is remarkably similar to what happens in "theater mode," developed later for certain first-person videogames. In *Halo: Reach* (2010), for example, the user can replay a past game session and, using the temporal controls, stop, start, rewind, slow down, and freeze the action at any given point. The user can then "detach" the camera's point of view from the avatar to achieve a free-cam which can be moved anywhere in the map in real time. In effect, detaching the videogame camera and freezing the action allows for time slicing effects such as bullet time.[Q]

Again, this is possible because of the topological nature of the videogame medium. In a videogame, time and space are topologies. They exist as separate data trees and can therefore be affected individually. In comparison to cinema, one can speed up and slow down a film but one can never enter *into* the space in three dimensions. That agency is left to the camera operator and is fixed in the final edit of the film. However, the bullet time effect in *The Matrix* is a dramatization of this concept, as called for in the narrative with the characters' ability to manipulate time and space.

Yet there are still differences in the way the bullet time effect is achieved in the two media. The first major difference is that, when engaging "theater mode" in a videogame, one is not looking at photographic images of real space but at a simulation. Perhaps verisimilitude will never reach the point where the live actor and location are not missed. However, one can imagine that, as we spend more of our day-to-day lives in virtual space, the integration of the experience into our lives will overshadow any lack of realism, if indeed there remains any, years from now.[2] One could say that simulation

is unconcerned with photorealism. As a type of representational realism it exhibits its own weaknesses, as eloquently described by Antonioni above. His photographer struggles unsuccessfully to find the real behind the opaque images. Simulations such as those found in videogame spaces side-step this issue. Rather than attempting a new and more real representation, they present an immersive modeling of a "knowable" space. The quantifiability of the space presented as a series of topologies creates an experience that is not representational in the traditional sense.

The second difference follows logically. Due to this "knowable" aspect of games, the topologies abstracted allow us a far more plastic and manipulable approach to spatial and temporal aspects of our creations therein. Not only can I recreate bullet time quite easily in *Halo: Reach* (2010), I do not even have to rely on predetermined camera positions to do so, as with the still camera approach in *The Matrix*. Interestingly, visual effects supervisor John Gaeta refers to his still camera rig as a "virtual camera" (*Empire* 2006). In one sense this is correct. He is simulating the effect of a free-cam in the medium of film. But it is still restricted by the properties of the physical world, and is therefore considerably less manipulable.

Jean Baudrillard's concept of simulation plays a major role in *The Matrix*. Peter Nichols reports that Jean Baudrillard's *Simulacra and Simulation* was given to the actors to study as part of their preparation (2001, 23). A copy of the book even appears briefly in the film. In a sense, the matrix in the film is a simulation of the real world which is used to fool humans into thinking they are living in reality. However, according to Baudrillard, "simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreality" (Baudrillard 1994, 1). This is certainly truer of videogames than of the ideas presented in *The Matrix*. Although the plot of the film mimics the idea to a certain extent, it is crucial that the simulation has no original. It is a new thing unto itself. This is clearer in the world of videogames, where there is a break with representational modes such as film. The image is not "transparent" and does not represent something real that lies beyond. It is an opaque and quantifiable real in itself.

Baudrillard protested that the writers misunderstood his book. In a 2008 interview he says, "the real nuisance in this movie is that the brand-new problem of the simulation is mistaken with the very classic problem of the illusion, already mentioned by Plato. Here lies the mistake" (Baudrillard 2008, np). One might be reminded of the magician Méliès and of Godard's 24 "truths" per second revealing that there is no truth and the general goal of cinema as a way to capture an unknowable real. If film is the "illusion"—the shadows on the wall in Plato's "Allegory of The Cave"[R]—then the virtual space of a video game is an example of the simulation of which Baudrillard writes.

Perhaps as a machinima artist I should not be too quick to proclaim my chosen medium's resemblance to such a dystopian philosophical viewpoint. However, it does appear to me that simulation presents an interesting alternative to the shortcomings of earlier realist media by allowing the creation of "opaque" and quantifiable models in place of the false transparency of representation.

Machinima

How, then, do the ontological differences between film and videogames as outlined above affect machinima? As alluded to in Frasca's kaleidoscope example, videogames are not a collection of images or narratives. First and foremost, they are engines. They allow the creation of mediated experiences even within the context of linear narratives such as those in the *Halo* games. These mediated experiences can be gameplay, or they can be recorded as machinima.

Examining the ways in which this difference shapes machinima, we can look first at how production tasks break down in the two media. A film set requires a high degree of job stratification as well as organizational synchronicity among the crew. Film and sound are captured at the same time. Occasional overdubs and additional dialogue recording (ADR) aside, the majority of takes require synchronous performance of blocking (the movement of actors) and speaking. By contrast, in machinima, capturing the shots can actually happen at a later time. This splits the director's role into two parts—directing actors and directing the camera—which can be non-concurrent, thus allowing the director to concentrate more on each task individually.

A typical shoot for my series *This Spartan Life* (2005–present)[S], is broken into two basic parts: blocking and capturing. During blocking, the actors act out the scene in-game. I record the dialogue as audio but do not record any video. We concentrate on getting the movement of the characters and the reading of the lines correct. Blocking is further broken down into "set-ups." In film, a set-up is a general area in which more than one camera angle is shot but which maintains a generally consistent lighting configuration. Because the actual capturing is done later, our set-ups do not require multiple camera angles at this stage. We simply act out the action in the game space and record the voice. Once this has been achieved for all the set-ups in a shoot, the actors are finished and the capturing can begin in theater mode whenever we like. Imagine if, on a film set, the director had only to worry about blocking,

acting, and recording dialogue and could sit down with the cinematographer at a later date to work out the intricacies of visual coverage of the scenes.

The capturing process is also very different in machinima as compared to film. *Halo* automatically saves each game session to memory. It is critical to understand that this process does not save video or audio in any traditional sense. It saves only game data—the movement of avatars, objects, vehicles, etc. In "theater mode," these data can be replayed any number of times from any point in the time-line. I go into free-cam mode and position my camera accordingly. I refer to my notes for the best takes of each line and reposition the camera for close-ups, long and medium shots, establishing shots, and anything else I want to capture in each set-up. Replaying the game data from the appropriate point in the time-line, I capture each shot to digital video and lay it into place in my edit immediately. Unlike in a film shoot where the camera has to capture extra footage to allow for unforeseen contingencies in the editing of the film, in machinima camera operation and editing are closely linked and the needs of the editor can inform the composition of the shot more directly.

These are just a few of the ways in which machinima practices are affected by the topological nature of what I call the *knowable space* of videogames. But what about the effect of these tools on the syntax and the stylistic approach of machinima? Being a new form, its uses thus far have largely mirrored traditional visual media such as film. Machinima productions often mimic existing tropes, usually as parody. For example, *Male Restroom Etiquette* (2006)[T] parodies the familiar "public service announcement" form to great comedic effect. The long-running internet hit, *Red vs Blue* (2003–present)[U] is a futuristic situation comedy. *This Spartan Life* itself is modeled after television, with a "variety show" approach. Most of the forms bring with them accepted approaches to matters of story, continuity, and shot syntax. Working within a known system has its advantages, such as allowing the machinimator to concentrate on story. But few machinima pieces really take advantage of the paradigm shift from filmic representation to game engine simulation. When the issue is engaged in machinima, it is usually done by situating the plot within the cultural construct of videogames, an approach that treats the virtual space as a sort of separate reality, but one which is locked within the familiar associations of that construct. For example, in *Just A Game* (2007), director Nathan Moller[V] mixes live-action scenes of gamers with their avatar counterparts. The plot unfolds in real and game space at the same time. Similarly, in Furnace Media's *Game: On* (2005)[W], the plastic universe of the game world is presented as a separate space. This may be seen as a hybrid approach, which relies on a filmic tradition similar to movies such as *Brainstorm* (1983) or *Lawnmower Man* (1992). But what about a

medium that treats this new space outside of a filmic approach? If game space is a new *knowable space* that enables a topological plasticity and a break from traditional representation, could machinimators embrace this shift with a new visual syntax?

There have been some small steps in this direction. *Ignis Solus* (2007)[X] appears to be a whimsical study of a lonely character, known as Pyro in the game. Finding himself alone, he interacts with whatever he can to entertain himself. He picks up a briefcase and brings it to the enemy fort. This is, in fact, a game of "capture the flag," with the briefcase standing in for the flag. But *Ignis Solus* maintains an interesting narrative ambivalence, engendered by the introspective music and laconic behavior of the protagonist. Soon after picking up the briefcase—the only real glimpse of narrative development thus far—he abandons the task. The music, which had locked into a groove, drops back down to its suspended chords and hanging melodic fragments.

These scenes bear a certain similarity to the wandering photographer in Antonioni's *Blow Up*, discussed above. With the first briefcase delivery, narrative is set in motion, but when he abandons it, there is an even stronger effect of freeing us from the plot and returning to the simple exploration of space, just as Antonioni's photographer abandons the guitar fragments on the sidewalk. Once abandoned, the briefcase and the guitar are both forgotten. Narrative, having been engaged and then abandoned, is now not simply ignored but deliberately denied. In the absence of story, the focus moves to the exploration of the game space.

The visual syntax used in *Ignis Solus* relies on an elegant use of film conventions—slow lateral tracking shots, shaky "handheld" shots, etc. But there are also a number of static shots through which the character wanders. While such shots are certainly used in films, I argue that they have a different effect in machinima. The mathematical game space exists before and after the character enters. It is not suggested by fragments of celluloid which the brain may interpret as a space. This is alluded to in the character's playful *dérive* which presents the space on its own terms, not as a function of narrative. But, unlike Antonioni's characters, we can "know" this space.

One can imagine a *verité* approach to machinima that expands on this, in which the visual is not treated as a transparent representation of our reality, but as an opaque simulation. This may be achieved through attention to the continuity of the space. I attempted something like this in a *This Spartan Life* interview with Malcolm McLaren in 2006.[Y] Knowing that Mr. McLaren would deliver a fairly unbroken stream of consciousness, camera operators Terry Golob and Michele Darling covered the action each in a single long take. We believed that this would also give a better sense of the continuity of the game space. Each static shot was held until McLaren and I disappeared

from view. The proximity audio setting in *Halo* made it so that our voices also trailed off as we left the shot. We asked other gamers to take part in the shoot by situating them in our path where they demonstrated various game glitches. The intention was that the nature of game space would be exposed somewhere between the temporal and spatial continuity of the shots and the discontinuity of the movement of the avatars in the game.

But this approach still leaves out the very important aspect of user agency. Watching a linear machinima piece does little to immerse the viewer in the space. Sandbox-style videogames like *Grand Theft Auto III* (2001) have long allowed for a maximum of user agency in choosing the ordering of the narrative structure and free-roaming abilities. It would be interesting to see an immersive machinima project, freed from the needs of an actual game with goals and rules, in which all action within the space is predetermined but its point of view may be changed at will by the viewer. This might resemble the interactive cinema experiments made by Lev Manovich and others but with the added advantage of a topological structure that allows viewer agency. This may not even be considered to be machinima at all, but some hybrid form of interactive media. A game space with no game.

Final thoughts

The first filmmakers came to their art with little more than an understanding of still photography. Seeing their works projected on the screen, they began to understand the nature of the medium and it further informed their art. A little later, Orson Welles must have known intuitively that the "deep focus shot" and the "shot scene" revealed something intrinsic about the medium, just as Antonioni employed his aesthetic of disjointed wanderings in an attempt to explore the idea of filmic representation of space. From such films lies an intellectual bridge to the realm of videogames. Simulation presents a new approach to mediating our world and we are still working our way through what I believe to be the equivalent of the Lumière/Méliès period. Artists are not always aware of the inevitable ramifications of their choices, but they remain tuned into an evolving exploration of the medium in which they work. Cinema-style machinima is getting more sophisticated each year and promises to continue to do so. I believe that we will also see, concurrently, a new syntax that, rather than relying on cinema, will be responsive to the knowable spaces of videogames.

Notes

1 "*Dérive*" (or "drift" in English) is a term used by the Situationist International movement in Paris in the 1950s and 1960s and is linked to the practice of psychogeography. Guy Debord explains the *dérive* as "a mode of experimental behavior linked to the conditions of urban society: a technique of rapid passage through varied ambiances" (Debord 1958, 4).

2 As debatable as this point is, we will leave it for another article to discuss the "uncanny valley" effect and other issues of verisimilitude.

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3

Be(ing)dazzled
Living in machinima

Sheldon Brown

In the creative function of language non-truth or less-than-truth is, we have seen, a primary device. The relevant framework is not one of morality but of survival. At one level, from brute camouflage to poetic vision, the linguistic capacity to conceal, misinform, leave ambiguous, hypothesize, invent, is indispensable to the equilibrium of human consciousness and to the development of mankind in society.

GEORGE STEINER 1998, 239

Consider as an aspect of the avant-garde art cinema movement (as characterized by P. Adams Sitney (1979) and represented by artists such as Maya Deren, Stan Brakhage, Hollis Frampton, etc.) the denormativizing of

cinema. These artists/filmmakers took accruing cinematic sensibilities and built alternative artifices that evaded, glancingly addressed, or completely ignored pluralistic cinema. Works had glaring apparency, enacting their own type of dazzle such that some were difficult to watch while still commanding attention.[A] Their status as cinematic spectacle could elicit thoughtfulness in an age when one cultural act occurred at a time. Now the focused attention that these avant-garde strategies required might not stand a chance. Michael Snow's *Wavelength* (1967)[B] becomes another ambient channel of media decoration, helping to illuminate our smartphone keyboards while we catch up on our Facebook posts (at least until it is rescripted).[C] We aren't teasingly vexed by its set-up and inevitable conclusion, attentive to occurrences that might undermine its own bet, such as the changing of film in the camera when it runs out. We used to go along with this (at least some would). Those who did had a belief, or at least a hope, that their efforts might have a revelatory reward. It was a cinematic aerobic workout right at our lactic acid threshold of attention span, spurring new questions about a changing relationship to cinema.

The mid-twentieth century's media artist's agency was to be a radical alternative to an aesthetically and ideologically conservative, slow-moving, and entrenched status quo of mass culture. But with the digitization of media forms, the invention of new mediums is as available as sites of action for the artist as existing forms were to their content. Contemporary media art production now has the creation of its form as an aspect of its stakes (even when this isn't undertaken, it is still present as an option not exercised). What might be the possibilities that media artists have when new mediums, such as machinima, emerge? How does the cultural role of this nascent (and possibly transient) form inform the types of engagements that the artist might employ? Machinima has already achieved a certain level of codification such that aficionados recognize it when they see it. It operates as a subcultural expression—which may be simply characterized as "movies made with videogames"—yet I will argue that it expresses cultural trends which extend beyond this simple description. In this chapter, I will trace the machinimatic impulse as coming from a more general condition of how cinema now operates in culture at large—from its ubiquitous permeation of the physical world to how it provides a framework for our imagination. Machinima's evocation of the operational activity of videogameplay, colliding with the narrative allusions of the cinematic, suggests a means of cohering aspects of the contemporary into a meaningful framework. Using examples of my own art installations to reveal aspects of what has emerged as machinima, I will show how several artworks of mine have both prefigured and continue to expand the range of what is now called machinima.

Naming this set of cultural activities demonstrates that there is enough commonality in forms of expression and enough uniqueness from pre-existing forms (in this case, such as demos, computer animation, speedruns, gameplay recording, or cinema in general) that expressive intent can take advantage of cumulative practices to create an increasingly sophisticated syntax. At least, that is how we came to understand the development of media forms in their pre-digital days when they emerged every few decades or centuries. Now the digitization of media production and distribution brings a continuous proliferation and hybridization of media forms. So what is the use of concocting the neologism "machinima" right now? Can there be a *productive* tension in having some common, recognizable forms of its practice, along with an imaginative and expansive application of its underlying methods? Cinema as a concept has proven to be a useful idea, both allowing for the development of complex semantic methods that have broad cultural legibility as well as providing a platform for gestures that radically reconsider the basis by which its underlying qualities can be employed for meaning-making. In the history of cinema, we have seen this take place through activities that build its methods from within its normative tradition as well as through activities which are determinedly positioned outside of its typical cultural operations, such as in the works of the artists mentioned above. Machinima may not have arisen from the specific acts of the cultural vanguard, but, as I argue, its coming was prefigured in both mainstream cinema and in some of the artworks detailed below.

Cinema worries about its future

In the 1980s and 1990s, cinema saw the coming of virtual worlds and how they would trouble its cultural role. Movies presented these coming virtual worlds as alluring alternatives to living in the resistant, compromised, messy, costly, and limited real world. These virtual worlds would also supersede cinema as culture's principal fantasy machine (see Katherine Bigelow's *Strange Days* (1995), Wim Wenders's *Until the End of the World* (1991), Oliver Stone's *Wild Palms* (1993), and David Cronenberg's *eXistenZ* (1999) as among some of the better examples). In these speculations, we considered implications of this new mode of quasi-cinematic being, with cautionary tales of an upstart new medium that was going to collapse the fantasy of cinema into the real lives of an audience left without the guiding hands of directors, screenwriters, and cinematographers to make sense of these experiences for us, the audience.[1] But while cinema about virtual worlds may give us one way to wrestle with

their implications, cinema *from* virtual worlds gives us much more, including what is increasingly the form, methods, and future role of cinema.

The primary problem with the above examples of cinematic examination of virtuality is that they treat the virtual as distinct from the cinematic. Machinima, on the other hand, comes about by a deliberate collision of the two; it is a cinema born from the virtual. It creates a space of meaning that illuminates the roles each of these two realms plays in constructing experience and meaning, performing an Eisensteinian montage clash between mediums. And it is through a particular type of montage, discussed below, that we may find a useful antecedent to illuminate the emergent operations of what we are now calling machinima.

Art provocations towards a messier future

Whereas examples from mainstream cinema display anxiety about cultural developments which may obviate its usefulness, works of art I created around the same time were identifying a liminal space between cinema and virtual worlds as a zone of generative tension. This attitude differs from the situation of the post-war avant-garde filmmakers mentioned above, in that I was anticipating a transformation (or an end) of the current state of cinema, and my gestures were stabs at making something from its aftermath. The artwork was not taking a dialectical stance between cinema and art, but its verve arose from the dissonance of cinema's transformations by digital processes. These early artworks undertook concerns about what would become part of the more general phenomena of machinima. It was not the purpose of these works to predict, describe, or specifically develop machinima; rather, they addressed cultural developments that would later prove to be aspects of machinima, such as how the ubiquity of cinema has blurred distinctions and created new possibilities for the roles of spectator, actor, and creator, and the legacy of antecedent cinematic machines to machinima's Gestalt.

As cinema becomes a native digital medium rather than merely a form translated into digital methods, fundamental changes likewise occur in its ontology: what is cinematic representation and who are we as viewers, creators, and participants in cinema? This is an expansion of the typical use of the category of machinima as movies made with videogame engines, whose mode, methods, and implicit semantics can seem to narrow its purview to an examination of being that arises from videogames or virtual space. Instead, it may be useful to see machinima as a sensemaking schema operating in a manner that isn't confined by virtual realms, but is attenuated to our general state as inhabitants of physical and virtual worlds which are both scripted and

each day become increasingly intertwined. The concept of machinima revises relationships between authorship, viewer, and cultural artifact, providing an expression of the complex agency we have in a post-cinematic world in which we exist in coded spaces—a condition that emerged in the late twentieth century and that is now pervasive.

Art anticipating machinima

In the work "MetaStasis/MediaStatic" (1989),[D] emergent computational affordances operate as a cybernetic kludge onto the apparatus of the cinematic mundane, giving a new choreography of the world. A "home-made" video projector, built using a black-and-white TV tube, a lens, structural tubing, cement, and motors, is spun at 300 rpm in an immersive "video-shack." A digital control system choreographs the elements in the installation, exploiting our perceptual biology to take apart and reassemble the phenomenon of television such that it becomes an all-encompassing field of imagery of which the viewer becomes a part. At the core of this image space is the ominous whir of a new cinematic machine—a physical manifestation of a transforming cinema getting more pervasive and ubiquitous as it becomes fodder for digitally based processes. The goals of the "MetaStasis/MediaStatic" artwork are to make this cultural transformation palpable via the atmospheric disturbance created by the vortex of the machine and the distortions of the architectural environment that is necessitated to create the effects.

The cinematic narrative of "MetaStasis/MediaStatic" is a product of automated editing. Its compositional method is an algorithmic cut-up of the found objects of tele-cinematic broadcast space, owing more to Terry Riley, William Burroughs, and Marcel Duchamp than it does to Sergei Eisenstein. Its edits start at a pace that is familiar to any channel surfer, but ramps up to a fervor where it becomes part of the logic of the time of the frame. This speedrun through the channel space ascends to produce the climax of one's time in the "MetaStasis/MediaStatic" video-shack, before ejecting the viewers out through its automated portal.

Montage as cinema machine

In "MetaStasis/MediaStatic," the exterior of the immersive chamber suggests that there are implications for the ubiquity of mediation. A follow-up work, "The Vorkapitchulator" (1993), E takes as its subject the digital cinematic

machine in the making, with its expressive launchpad provided by a particular cinematic method (Brown 1994). In "The Vorkapitchulator," a modified home exercise machine is mounted by a viewer/operator, face down, legs spread, head locked in place, arms turning cranks of a generator which propel the work into action. One's gaze is directed through a rack of computer equipment where a virtual image is cast into the machine space/set beyond. The digital cinema machine is built with a set of analog video cameras mounted on the various axes of a robotic lead screw, each decoding an aspect of the space through which it is moving. A frame of cascading, rotating squares mimics the first forms of computer art, as well as the spinning newspaper headlines of "march through time" montage sequences. A pair of 3D cameras moves through a field of text, picking out letters to be turned into a *faux* computer graphic logo of statements, while the last axis is a zoetrope of imagery turned into cinema through the spinning camera at its center. The imagery and operation of the apparatus speak to the slippery transformations of the self that emerging digital identities provoked at the time. The textual fields consist of verbs from boy scout and girl scout handbooks, with the expected bias found in each: the girls are encouraged to cooperate while the boys are spurred on to compete. The zoetrope is a frame-by-frame breakdown of gender reassignment surgery, while the exercise machine is the device to reshape one's physical body—each of the elements speaks to an aspect of the ways we are already invented and re-invented, while our digital identity presents us with radical new fluidity in these processes.

"Vorkaptichulator" pays homage to the work of Slavko Vorkapich in the form of a machine art installation, and deliberately intersects his codification of the cinematic montage with the emerging tropes of digital cinema. Vorkapich developed the montage interlude, distilling cinematic methods into a poetic narrative bridge. He employed a sensibility of surreal collage in pieces such as "The Furies" from the movie *Crime without Passion* (1934) (which could now be seen as a movie which expresses Second Life aspirations).[F] His montage sequences redeploy the elements of the film with a new logic: rearranging settings, actors, and narrative moments, juxtaposing them by formal relationships or radical restructurings of time and space which can place the movie in a historical context or reveal subconscious simmerings underneath the narrative.

This reuse of cinematic assets gives us an idea about the coming of machinima, in which new scripts are authored with given assets of a virtual world. While new machinimatic narratives will range from those closely related to or spun off from the original game engine to those that are surrealistically orthogonal, the use of the asset or code base creates an inescapable relationship to its original. Contemporary cinema still uses the montage

sequence, albeit often with less dependency on the visual surrealism of Vorkapich, although the sequence of "Gutterballs" in *The Big Lebowski* (1998) is a notable homage, but also with sensibilities as varied as the "last day as a wiseguy" segment in Martin Scorsese's *Goodfella*s (1990) and the "Shout" montage in the movie *The Wedding Crashers* (2005).[G] In each of these, the normal cinematic narrative flow has shifted into a transcendent gear of operation. Experience has achieved an *optimal flow* (Csikszentmihalyi 1990), and the confines of the typical narrative structure are no longer required.

The Vorkapitchulator is thus a cinematic machine, producing digital cinema by physically manifesting the tropes of digital cinema (3D graphic logos, morphing image sequences, 3D stereography, interactive interfaces, computer controlled camera choreography, and procedurally generated graphics, to name a few) and capturing them with analog, robotic video cameras. This shifting of the site for the (then) digitization process, where it is invisibly contained within the image to an embodied apparatus which is viscerally felt, may be seen as a way of pointing to the broader condition that machine cinema was likely to accelerate—namely the cinematization of experience, or our search for peak experience when everything seems to have that "like I was in a movie" *flow*, or a perceived aesthetic order or narrative structure that is typically absent or wanting in the everyday. The montage sequence's collapse of temporality and spatiality into a collage of associative image sequences, often rhythmically paired with music or a narrative voice-over, gives us the cultural template of this desire.

"Ain't nothing but a movie" (Scott-Heron 1981) (DF 8)[H]

If we have strived to live life as if we are in a movie, we have also increasingly made our world into a site of cinematic apparatus. The car radio and the personal portable stereo were perhaps some of the first cinematic experiential generation systems, and now we have screens everywhere in the world, cladding the sides of our buildings, embedded in the furniture of our cars and airplanes, and carried in our pockets on various mobile devices, some of which are still referred to anachronistically as "phones." We create mental montages as we drive around the streets or ride the subway or jog down the beach. Our (day)dreams locate us as the star in a solipsistic, automatic, and pervasive theater, forming a transcendent relationship to the world through which we glide to our own supercharged soundtracks, living our own "last days as a wiseguy"[I] with the thinnest of artifice required. We

reframe our own movements through the world by the application of these templates to cohere and manufacture a meaningful experience of living in the world.

Does this reel only play forward? How does experience flow back into the transformation of the cinematic? Cinema *verité*? Reality TV? Mockumentaries? From Bunuel's *Land Without Bread* (1933)[J] to *This is Spinal Tap* (1984) to *Jersey Shore* (2009), these winking odes to the cinematic testify to our acknowledgment of our complacency to deception as long as it is entertaining. It may even reveal some essential aspect of mimicry and socialization in our biological capacity and need for empathetic experience. We might consider this kind of reflective logic as an aspect of contemporary machinima to see how its mirror reflects upon aspects of our condition.

A function of machinima is arguably its mediation of virtual experience to human consciousness. How are we to consider the experiences of the virtual? Do we know when we are the reader, viewer, or product of culture? Are virtual realms sites where we have vital experiences? Or is there some new hybrid of being and reading, creating, and being consumed which is taking place here? Looking at machinima from perspectives of aesthetics and method, we can see a trajectory in its cultural operations. Consider Vorkapich's montages: his surrealism may have been essential to the initial development of the pictorial and temporal compositional potential of the sequence, but its lasting impact has been in the function of its compositional structures. Much of what is now recognized as machinima is due to a dissonance between things that look like videogames but act like cinema, an equation that, thus far, lacks commutativity—it doesn't work in reverse—but this visual signifier may just be a temporary form.

Digital image aesthetics in machinima and cinema

Aspects of computer games and virtual space seem to beg to be considered as cinema—they are experienced on similar screens and they can use similar pictorial, temporal, and auditory compositions. Yet in the mainstream of both these forms, they create experiences which are best not compared. Thinking about videogames as cinema is as useful as thinking about music as literature. There may be some parallels but they are generally aimed at different things. This difference gives clarity to machinima as distinct from the videogame. Machinima is considered on most aspects similar to any other cinematic form, or as a pastiche of a cinematic model. We recognize its form

as being "like a sitcom" or "like a movie," but machinima gets its profile by its distinction from these media. It is like an episode of *Friends* (1994–2004) but it looks like *Unreal Tournament* (1999). Or it is a mashup of *Call of Duty* (2003) play but it looks like *Pokemon* (1996)[K] (game-to-game machinima seem to have commutative properties).[L]

This mashup parallels how the physical and the virtual are intertwined via their increasingly scriptable operations. When forms are scriptable, they become re-authorable as a means of participating with them. Participation with these forms includes such things as watching them, interacting with them, clicking on them, linking to them, and re-authoring them, or becoming involved with mediated elements in other ways either intended by authors or not. Re-authoring is a new cell in the matrix of author, viewer, and player. It can start with a familiar, winking, ironic stance,[M] or operate as a site for viewer/user cultural evolution.[N]

So how do we know that what we have is machinima and not some other type of cinema? After all, cinema is now a digital medium—from movies to television, digital methods are the defacto norm in its production and distribution. The few pieces that are still occasionally shot on film do so as a kind of arcane affectation. While analog video has long been cheaper and quicker to produce than film-based cinema, digital cinema achieved what analog video never could—being indistinguishable from, and even improved over, chemical film. Digital cinema often has an aesthetic of invisibility: we aren't aware or concerned that the movie is shot on digital cameras, edited as digital files and sent on hard drives to movie theaters for liquid crystal panels to reflect onto movie screens. The aesthetic of digital cinema is mostly that of photo or hyper-realism—making the real more idealized or more fantastic, but within a vocabulary of realism. When digital extensions are added to movies, they often extend or blend into a photographic record. They don't carry the entirety of the representation on their own basis as elements that may have a digital aesthetic, but are cast in the light of elements such as the visual authority of human forms. This is all delivered by the interaction between many algorithms and pieces of data (which are usually in the form of images that undergo significant transformations). For instance, the way a piece of metal looks—its reflective qualities, its diffusion of light, its surface texture—are all described in algorithms that have been developed to provide a visual simulation of how metal often looks in the world, computed in as little time as possible. Typically, these algorithms are not simulations of how metal achieves this visual effect; they are just attempts to create a visually acceptable image.

It can be the case that algorithms exist for computing a particular visual characteristic to produce a more "naturalistic" result than those used in a

game, but often with computational costs that will be too high for viable use in an interactive graphic. These types of algorithms were first implemented in renderers for use in producing non-interactive computer graphics for movies (for instance, the digital character of Gollum in the *Lord of the Rings* (2001–2003) movies has skin that is rendered using a photon mapping technique (Jensen 2001)). Versions of these algorithms, in turn, make their way into games when the ongoing speed of computers meets the re-engineering of a more efficient algorithm. These digital cinema processes are developed with the impulse to make the fantastic more believable—the production of a contemporary film as a collage of dozens of separate files into the final frame—or the ordinary just a bit more idealized, retouching images with a mark that is finer than the final resolution of the image. The flip side of this "naturalistic" digital cinema is the 3D computer animated movie. This form has developed its genre tropes: toy-like aesthetics of big eyes, large heads, and children's stories from *Toy Story* (1995) to *Avatar* (2010)—simple tales of good and bad, loss and underdog heroics.

On the other hand, machinima, for the time being at least, trades on its aesthetic by clearly evoking the synthetic and digital world of the videogame. Digital bits are not put in the service of extending the illusory cinematic veil, but instead celebrate the artificial realm of the algorithm. More than that, the visual signifiers place the works in a particular technological moment or situate the form in relation to latent readings found in a particular platform. We can usually pin down the date of most machinima productions to a few years around the release of a particular game technology (e.g. *Unreal Engine 3* (2004)), or to when its technology (e.g. DirectX 9.0) had currency. The short shelf life of these underlying technologies, whose rapid obsolescence is voraciously pursued by the industries responsible for their production, is also another way in which the stakes of machinima may seem to be constrained to subcultural relevance (e.g. a *Legend of Zelda* (1986) soundtrack on a *Halo 3* (2007) image is soooo funny).[O]

Consider this aspect of machinima as a contrary sensibility to digital cinema's industry-dominated aesthetic urges. While the game technology industry touts its latest progress towards some platonic notion of photo-realism, machinima utilizes the visual artifacts of the game engine as a necessary signifier of the work, even as it no longer requires the computational dependency on real-time game engine rendering. Machinima productions could be rendered by a different renderer than the one in which the actions are captured and saved (described below in work that I have done). The visual aesthetic thus deliberately points to the initial game engine and often engages disjunctions of narrative content and visual form. It disrupts the "progress myth" of the game industry, which equates improvements in the

medium of videogames to achievements in photorealistic aesthetics. Here the visual vocabulary embraces the artifacts at hand as significant elements of the vocabulary of the form. If we reflect on the gestures of the avant-garde filmmakers which began this discussion, we see how visible sprocket holes, overexposed film, scratches, and "mishandled" film stock produced a new vocabulary for cinema that was eventually taken into and extended the gestures of pluralistic cinema. By mining what are often considered to be the shortcomings of the visual forms produced by game engines, paired with radically different content, we get to see how far that visual language can be stretched, and what happens when it breaks.

"Ain't really alive" (Scott-Heron 1981)

Machinima uses its jumble of cinematic and virtual space to trouble the previously discrete media roles of creator, viewer, and player. In the process, the gaze is implicated and generative, enacting a function that was previously theorized (Mulvey 1975). There is no passive viewer; when we watch, we have simply set the controller down for a moment and are taking a break from our role of expressing the mediation through our interactions, play, or creative acts. Machinima trades upon the aesthetic of real-time graphics to position the viewer as a transformed player/participant. It is a cognitive shift from action to reflection. It isn't so much that we have clarity about these roles as we are able to utilize the mindset that each provides, or that each role sets up for us certain expectations of who we are to be and what is expected from us. But this normalization of roles also has implications for what possible expressive ranges might be. This is the realm of the Duchampian ready-made and this R. Mutt agency may have limited potency, or even possibility for certain acts. Computer graphics creations already come with considerable technological determinism. One can work with different levels of acceptance of system features (e.g. will you code your own line drawing algorithms or use the OpenGL or Direct X calls? Will you use a raster scan screen, or build your own?). Within machinima, you are working with the visual and aesthetic attributes of another form by re-authoring their script to articulate your content. If you give up both the existing visual form and the script, you lose whatever the machinimatic gesture was offering to you in the first place.

For machinima to present an interpretive document of experience, we need to reiterate that the virtual spaces out of which machinima is created are places that one can *be* and not simply watch (as with cinema). When we are *in* that space, we have a range of agencies different from what we have in the

realms of the physical and of media. Machinima can choreograph the experiences within the virtual realm into a more succinct encapsulation, rendered into the form of cinema in which we currently have more cultural grounding. Beyond direct experience, scripting and editing open up consideration of the virtual realm by channeling its affordances that allow and demand the viewer to participate in authoring their experience. This opening is part of the subversive machinimatic gesture to the initial intent of the virtual world, and if subversive is too strong a term to employ (particularly as these realms increasingly include machinima authoring as a feature), then we can see how the process of picking and choosing pieces of the virtual realm to serve as components of a secondary authored form amplify and distort those initial intentions. Machinima enacts aspects of the possibility space of a particular virtual world that may lie beyond its typical operational modes and, as an intentionally authored derivative, gives an interpretive rather than operative reading. It provides a way of understanding the mediated realm which differs from even that which expert experience provides. If the virtual world has a seemingly limited expressive range, then machinima can expand its arc, à *la Pokemon* Gameboy machinima, which takes the elements of the game and applies them to new content.[P] If the world seems to be a jumble of unfocused (but relentless) activity, machinima is a way to bring coherence to this jumble, re-articulating it in a familiar language, one which we believe has resolution as the dramatic devices of cinema lull us into a belief of closure. Machinima allows us to accept virtual space as a coherent, authored realm.

Just as Frances Yates (1996) described the operation of memory theaters, I see machinima as a memory theater of the virtual, with cinema substituting for architecture to provide the organizing metaphor. Machinima is our way of encapsulating our being in the virtual world, a way of remembering by script. It contains where we went and what we did, more travelogue than diary, which we coordinate, organize, stage, and experience. It provides a way of being which is neither purely reflective nor exclusively reactive, but concurs with gestures which proliferate across the ways we are with media in general. In its conflation of actor and spectator, it idealizes our being in the world and the world as cinema. Our response isn't driven by an interior state grappling with self-knowledge—we are actors in this world. As actors, the interiority is a script. The interior isn't us, but its *enactment* is: the gesture; the way we move through fictive spaces; our responses. Can we be known as we were in the twentieth century? Are we still the same subjects we were before we lived in virtual space? How do our affinities, our Friends' lists, our Likes and our WOW levels define us?

Machinima's generative tension may come from this meta-fictional stance. Whatever its surface narrative might be, there is an underlying artifice that is

blatant. Whatever fictive conceit it is asking us to participate in comes with an inescapable wink about its artificiality. While we have come to generally accept the realm of the virtual as a place that we occupy with our own agency (constrained as it may be), we think we have now readjusted our worldview to locate the virtual realm in relation to our reality. This helps us in contextualizing the ultra-violence that is often experienced in virtual space as having little relationship to those same kinds of experiences outside of the virtual. But in machinima's use of that realm as a site of scripted fiction, with the equivalent visual terms as our own experience, it invokes the meta-fictional anxiety which occurs when we see that characters in a story have become readers of the same story, suggesting that we have some equivalence as fictional entities as we are also readers. If our virtual realms are equally or even more successfully inhabited (remember all of that cinematic flow?) by fictional characters, then surely our understanding of our own non-fictional being is correspondingly destabilized.

This machinimatic conceit is a pervasive attitude. Variations are popping up as first-order, deliberate systems rather than from the initial, hacker stance. Xtranormal.com,[Q] GoAnimate.com,[R] Animoto, DigitalFilms.com,[S] and animasher take our uploaded texts and images as fodder for their templates of animations, interludes, and animated slideshows. These machinimatic methods provide an organizing principle of cinematic clichés for the thousands of digital photos on our hard drives, just as machinima does to the endless frames of virtual experience we generate, becoming the convenient engine of our mediations.[T]

Machinima thus becomes a way of mitigating our own visuality. To be in virtuality is to be seen. It is an "I" that has a deliberateness developed with the affordances of the software schema. The structuring of this into a machinima can be a strategy of invisibility to wrest back some control over our apparency. If machinima can be viewed as a distillation of this experience into a refined coherence, then we are producing a vividness that can deflect the gaze away from a direct view of being to one of fictive narrativity.

All the world's a stage

With machimima, we get a circuit of representation that plugs the artificiality of virtual worlds into the illusions of cinema as a way of making a more substantial relationship to the real. It shows the viability of the virtual as a medium of translation and acts as a means of prototyping our ways of being in the world at large. With the virtual participating in the scopic operations

of cinema, it attenuates our view and our visibilities. As the physical and mediated continue to gain characteristics of each other, our visuality becomes an asset to contend with. As we become a society that is increasingly involved in bi-directional gaze with cyberspace, the consideration of our views and our visibilities becomes more crucial (Branscombe 2011).

The proliferation of cameras in the world enacts the shift of the physical into a staging ground of mediation. Estimates of hundreds of thousands of surveillance cameras cover London today (Palmer 2010; McCahill and Norris 2011), and this rapidly escalating deployment of fixed points of gaze is just one type of new eyeball. Add several million more cell phone video sensors, supplemented by new types of unmanned autonomous airborne vehicles (increasingly the weapon of choice for the US military), and you can see how quickly the world is becoming a place where we will always be actors on its stage—even coming to a bird house near you (*The Economist* 2010).

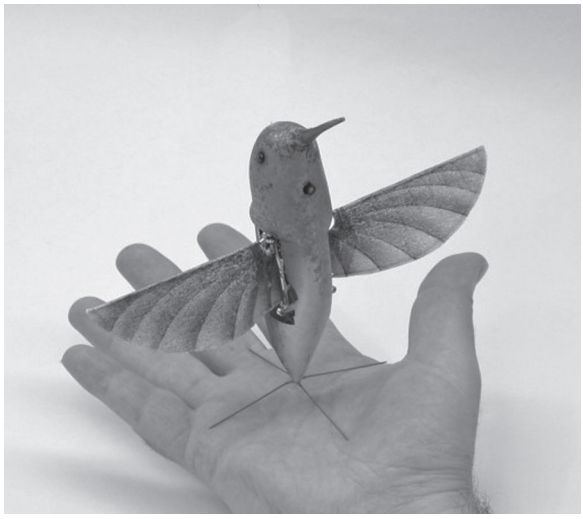

FIGURE 3.1 *AeroVironment, Inc., "Nano-hummingbird"*[U]

Increasingly subjected to all these eyeballs, we might correspondingly adopt strategies from our virtual agencies through an attitude of machinimatic authorship in the real. An overt apparency can be a method of dazzling the circuitry of the autonomous systems for a moment, much as World War One-era ships[V] or prototype cars of today that utilize avant-garde constructivist paint schemes to befuddle viewers about what they are seeing and what the object might be doing. We thus have to move one step ahead of these consuming gazes by employing vanguard visual strategies, *à la* the

concrete poetry of "captcha,"[W] or adjusting our fashion to either allure or evade our computational beholders (Harvey 2011).[X]

As Steiner (in the opening quote to this chapter) characterized the proliferation of languages as an expression of our instinctual drive for privacy, shared secrecy, and territorial dominion, the act of translation becomes a necessary means for creating coherence and a shared worldview. With machinima, we not only translate between the mediations of cinema and virtuality, but also between virtuality and reality. Machinima can thus be a fulcrum for understanding the condition of our times more completely. Using its methods can be both insightful and effective in creating new culture.

The Scalable City[Y]

It is with these considerations in mind that I have been approaching the creation of my newest work, slotted somewhere between virtual space and cinema. One of its characteristics is that it is a way of making virtual space as if it were cinema as well as a way to make cinema as if it were a virtual world. But that is perhaps not entirely accurate—I make a set of possibilities that are sometimes articulated as cinematic pieces and sometimes as virtual worlds, but in either case there is a dependency of the work having bets in each realm. The virtual world is meant to be viewed, with one's actions enacting a cinematic unfolding of its event space. At the same time, the gamic nature of the movies is inescapable.

I have been creating a multi-faceted project—*The Scalable City*—which is made by activating this circuit at http://scalablecity.com. Each part of this project invokes both cinema and games, and employs a productive use of each form to produce the other. Portions of the work may be characterized as machinima, although I might stretch its definition to cover the project's entirety.

The Scalable City project is motivated by the ways in which the physical world is increasingly being created via the sensibilities and processes we have developed in digital media over the previous several decades. The "real world" thus becomes an expression of algorithmic desire, conforming itself for optimized algorithmic expression and consumption. *The Scalable City* extrapolates this situation into an interactive artwork similar to a computer game. Play consists of building virtual cities by interacting with data visualization processes. Satellite data and ground photogrammetry are transformed through a series of exaggerated algorithmic gestures. The forms of this synthetic world are obviously related to their originals in the physical world,

but the process of their algorithmic digestion and re-manifestation ladens them with artifacts.

The project starts with landscapes where tensions between nature and culture are ripe, including southern California, Dubai, the Three Gorges Dam, and the Alaskan National Wildlife Refuge. Generative collisions are initialized between nature/culture, first world/third world, and self/society. Data from these conditions are fed into algorithms which have been developed to express different cultural domains. For instance, the landscape is created by treating a 3D form as a 2D image with cut, copy, and paste routines. Computer vision techniques analyze the resultant form for viable areas to occupy with a road system consisting of Archimedes spirals growing via an L-system. Architectural fragments, imbued with rudimentary functional knowledge, are scattered throughout the landscape. Players of *The Scalable City* are embodied by a tornado particle system of photogrammatically derived automobiles with which the player moves through the landscape. As this vortex of vehicles flies through the environment, it stirs up the architectural detritus which then attempt to assemble themselves into collaged houses as they land. The houses, in turn, form the structure of a migrant worker shanty built with the formal elements of the suburban McMansion (however, only the perturbed optical skins, captured through the photogrammetry process, of this desired object remain).

The gameplay of the work serves two primary functions. First, it extends the gaze of the viewer into the complex realm of data, algorithmic, and social interactions of the work. Only by interacting with this situation may one hope to make sense of it. Second, as the causal agent of the transformations taking place in the world, the viewer is implicated as the operative crux for the ongoing dilemmas of the social and cultural milieu.

The history of the artwork's development began with the creation of a short cinema piece in 2006[Z] through which the algorithms and digital assets were developed (we will call this machinima type 1). However, neither the initial algorithms to create the visual phenomena were refined enough nor was the computer hardware fast enough for this work to have real-time interactivity. Yet the movie utilizes the visual sensibility of limited asset resolutions and rendering techniques that are evocative of interactive real-time virtual environments. It was meant to harken the virtual world to be born from this cinematic artifact. It may thus be seen as a kind of reverse machinima, albeit it is perhaps more useful to think of it as another type of machinimatic translation of a developing underlying script.

While this movie was being created, other aspects of *The Scalable City* were being developed into separate animations. In particular, the transformation of satellite imagery into patterned landscapes was turned into a

procedural animation that has been shown as both a stand-alone installation as well as alongside the interactive environment. This may be considered as the second type of machinima.

The first version of the interactive virtual world installation utilized three stereo projection screens and was shown at the Ars Electronica museum in 2006. The central screen was the interactive experience, bordered by side screens which ran machinima scripts in the real-time game engine of "before" and "after" gameplay conditions of the virtual world. This third type of machinima created scenes that I refer to as Eden and The Rapture.

The fourth type of machinima was a very high-resolution movie made by capturing data from interactive play sessions. This behavioral data is used in the re-rendering of the assets with much higher quality algorithms than are possible for the real-time graphic processors used in the interactive game. This is rendered at a very high resolution of 4,000 x 2,000 pixels per frame.[AA] A year later I decided to make the left-eye view of the same data so that the movie could be in 3D. To create this movie, a general machinima system was built into *The Scalable City*. From this system a series of technical videos have been produced, constituting a fifth type of machinima for this project.[BB, CC, DD]

While going back and forth between cinema and games has been valuable in the iterative production process, the more important point for me has been to try and engage the different types of viewing that each mode produces. I discussed above the complex role of viewer/player/creator that comes from machinima; in *The Scalable City* I deliberately move the viewer between these roles, specifically in the way the work is displayed—large-scale, novel, contextually unique—with a sculptural interface that locates the "player" as an element of the piece, all of which is viewed by the other museum visitors. The work doesn't have to be played to be experienced; one can equally have a worthy experience through watching others. However, if you play, the responsiveness to the touch of the ball and the recognition of your agency in the virtual world as a tornadic force deeply involve you in the implications of the work. The employment of a cinematic montage of camera positions moves the view of the world from first to third person, potentially confounding the player and how comfortable she feels as a player of the world. The player may be the cause of change, but she is only partially in control of her own agency. The work pushes her out of getting lost in it, even as it pulls her into its uncanny acts of landscape transformation. And it is this push and pull into the piece and back out to the world that is the transformative process the work hopes to perform with its audience. You are not just playing a game disconnected from the world at large: *The Scalable City* distills elements of your actions in the world, re-staging them through its peculiar capacities.

Visual analytics in *The Scalable City*

Performing this transformation is a unique process for each viewer, and the most recent developments of the project are to make it more adept at realizing this goal. The process of building machinimatic capabilities into *The Scalable City* has given it the ability to quantify players' experiences of the world. As machinima provides us with a way to understand the ontology of virtual worlds, it also provides *The Scalable City* with a method of assessing users within its virtual system.

Working with Lev Manovich, Jeremy Douglass and Erik Hill, I have also been developing cinematic renditions of players' behavior in the virtual world to determine if a player is having interesting aesthetic experiences. There are multiple types of these movies, ranging from recordings of what the player sees to movies that map particular aspects of players' experiences onto novel articulations of the virtual asset base, or visualizations of players' activities in the physical world correlated with their virtual world activities, creating a sixth type of machinima used in this project.[EE]

Making determinations about the quality of aesthetic experience for many simultaneous visitors over long periods of time would be difficult to achieve by watching the play sessions of each online visitor. However, by making cinematic visualizations of different data sets generated within the virtual world, we are devising methods by which the visual qualities of these machinimatic encapsulizations can be analyzed to make assessments of activities, by which the virtual world may also then be adjusted accordingly.

These six types of machinima differ in method of creation and relationship to productive and experiential aspects of the project, but I characterize all of them as machinima in their location between virtual world and cinema. They utilize the semantic methods of cinema to offer an insight into the ontology of the virtual world and, through this cinematic grounding, provide for interplay between the operations of the virtual to the understandings of the real.

It may be the case that machinima playfully distorts virtual experience for its narrative ends.[FF] However, in *The Scalable City* project, it is used to clarify and develop virtual experience. There is an aspiration of creating a virtual world experience which itself is able to provoke readings that are elusive of either cinema or videogames, turning what otherwise may just be seen as actions in space into meaningful structured activities which draw upon our collective narrative history to establish implied relationships between self, other, and surroundings. The reality of the virtual is key to its efficacy as a site in which one is an actor having experiences, and it is part of the lure of machinima, evoked through the aesthetic of real-time graphics, that this

reality is the basis of the machinima product. However, it is just as much a willing suspension of disbelief as it is in normative cinema. Machinima is a kind of dazzle of the virtual, an insightful brilliance which is both clarifying and confusing. It gives the virtual vivid apparency, clarifying aspects of its operations, but, just like a military camouflage strategy, its stark visuality can also be an overt distortion of the virtual experience. It turns out that the virtual is just as capable of being manipulated as the real.

Note

1 Cinema has often told cautionary tales about its media relatives. TV never fares well in the movies either—*The Truman Show* (1998), *Network* (1976), *Anchorman* (2004), *The Running Man* (1987), and *Videodrome* (1983) are examples of television gone awry.

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4

Moving digital puppets

Michael Nitsche, Ali Mazalek, and Paul Clifton

Machinima isn't animation! It's puppetry!

HUGH HANCOCK, HANCOCK AND INGRAM 2007, 16

The term "machinima" has been diluted into different practices using different tools (Nitsche 2007), but we argue in this chapter that game-based machinima remains a form of digital puppetry in which the virtual characters in a real-time game engine are used to perform an event and often to tell a story. The players' interactions are translated into the movements and expressions of these virtual puppets in the game environment. In this way, virtual characters turn into digital puppets that can carry out the necessary expressions. From an operational point of view of the usually goal-oriented game design, these characters turn into performative objects. Players-as-producers, a term established by Salen and Zimmerman (2004), thus modify not only the game technology, but also the play procedure to enhance this performative aspect.

However, a number of limitations apply. The way these virtual puppets are controlled is important for the levels of expression achieved. Yet the mapping of game controllers onto virtual characters rarely supports such expression: animations are usually either pre-fabricated and cannot be altered or they are procedural and cannot be controlled; customizing a character's animation set is often a specialized and difficult task; and game engines pose several obstacles in terms of staging and manipulation. Thus, while the principle of digital puppetry in machinima stands, the way it is enabled in practice is problematic.

This chapter investigates this challenge by first examining the historical evolution of the virtual puppet, before providing an overview of different implementations of game-based interfaces as puppet controls, including first-person-shooter (FPS) controls, gamepads, motion controllers, body as interface, body armatures, and Kinect. Our conclusion positions machinima as a form of digital puppetry within a technological and cultural framework. We build our argument on our experience in machinima, our own construction of digital puppetry systems, and our background in digital media and human computer interaction (HCI).

Rise of the virtual puppet in machinima

In terms of their design and practice, videogames and puppetry, as subforms of the larger field of performance art, are originally distinct domains. One widespread definition of videogames characterizes them as rule-based systems with "variable and quantifiable *outcomes*" that have different values assigned to them (Juul 2005; emphasis added). On the other hand, Goffman defines performance as "all the activity of a given participant on a given occasion which serves to *influence* in any way any of the other participants" (1959, 15–16; emphasis added; cited in Schechner 2002, 29). Next to these stands Paul McPharlin's definition of a puppet as "a theatrical figure moved under human control" (cited in Ryu 2008, 1). Our goal here is not to discuss the fundamental connections and differences between video gameplay and performance at large, but to focus on the question of "human control" in relation to the "image" in puppetry as a form of performance. Of relevance to our argument is the above-mentioned key difference between the definitions of game and performance, namely the distinction between a goal-oriented game and an influence- or expression-oriented performance. The artistic practice of game-based machinima unfolds as a shift from one to the other and the human control of the virtual character likewise changes.

In machinima, the goal of the game may be part of the drama and narrative, but it is subordinate to the expressive means at work. While the death of the player character, for example, may be a necessary twist to the unfolding story in a machinima piece, in a goal-drive gameplay session it is usually a sign of failure and indicates the end of the game. It is within this shift that we find the evolution from game object to virtual puppet.

Users, bodies, puppets

The puppet pleasurably challenges the audience's understanding of the relationship between object and life.

STEVE TILLIS, TILLIS 1992, 64; CITED IN CALVILLO-GAMEZ AND CAIRNS 2008, 65

Historically, the virtual puppet emerges from two movements which eventually overlap. The first movement deals with the debate of the human body's interaction with virtual environments, and specifically how this interaction addresses the connection to a virtual "other" in digital media and HCI. The discussion of the human body in the digital world is a core debate in digital media, touching on issues such as race, gender, and age in a digitized environment (see e.g. Stone 1991; Schroeder 2002; Haraway 2006). It is relevant for the expression and formation of new or hidden aspects of one's self (Turkle 1995) as well as the composition of whole new virtual communities (Rheingold 1993). Virtual worlds provide a cultural platform for this far-reaching self-expression and identity formation. These "arenas for social experience" (Stone 1998) have not only turned into stages for self-expression, but also more abstract artistic expression "as performance." Game worlds thus not only allow a new reflection of the self, but also that of larger cultural artifacts such as plays, performance art, visual and sound art, among others.

The inhabitants of Second Life (2003) are promised in it "a life without boundaries, guided only by your imagination." As cultural expression has always been part of this imagination, it is no wonder that Second Life users have staged not only multiple Shakespeare plays but also virtual re-enactments of famous happenings in the past, for example, in Eva and Franco Mattes's *Synthetic Performances*,[A] a series of six re-enactments of historic performances of the 1960s and 1970s, staged by the artists' virtual alter-egos in Second Life. In Chris Burden's seminal performance piece *Shoot* (1971),[B] he was intentionally shot in the arm by an assistant. In 2007, Eva and Franco Mattes staged a re-enactment of that performance in Second Life, contributing to the debate on the role of the virtual body as reflected in the digital

world. These re-enactments highlight the cultural role of virtual environments for theatrical performances and treat the bodies of the virtual performers like digital puppets controlled by their human operators.

Of at least equal importance is the transformation of traditional performance techniques into new forms of digital expression. For example, the Ballet Pixelle's[C] online world dance productions are choreographed based on specific qualities of Second Life, such as flying and synched animations. The virtual character is thus not only a point of identification for the user, but also an expressive canvas for others to read. It provides both the identity construction of the user (Turkle 1996) and the expression of a dramatic role in the virtual setting (Laurel 1991). As Randal Walser argues:

> A virtual object that embodies an intellect is referred to as a puppet, to emphasize that it is directed by a role player. Since an intellect plays the role of a character, a character can be said to be embodied by a puppet (which is to say, a puppet embodies both an intellect and a character).
>
> WALSER 1990, 55; cited in Sant 2008, 71

Videogames provide an ever-expanding arena to explore this dualism of performing object and imagined life in the figure of the virtual character. This connection has been researched from various perspectives such as the role of representation through avatars (Klevjer 2007; Westecott 2009), or the role of avatars in transmedia storytelling (Ryan 2006). With the body–avatar relationship taking such a central role in digital media and game studies it cannot be covered in any sufficient length, but it provides the first step towards digital puppetry.

The second movement deals with the expansion of traditional puppetry into digitally mediated domains with the help of new technologies. Puppetry always addressed the changing technological aspects of its production. With the rise of videogames and computer animation, puppeteers stepped into digital media. For instance, Stephen Kaplin (1999) sees in Manny Calavera, the star of LucasArts' computer game *Grim Fandango* (1998), "the digitalized future of the performing object" (30), steering the issue into part of a larger discussion on the relationship between live and mediated performances (Auslander 2008). Steve Tillis sums up the problem:

> The issue of real-time control seems less an issue of "What is a puppet?" than one of "What is a puppeteer?" A person operating a puppet (tangible or virtual) in real-time is palpably doing what puppeteers have always done; but a person working at a keyboard with a virtual puppet—despite the fact that one is controlling the movement of the puppet—does not seem

> to be engaged in the same activity, despite the fact that the result (i.e., movement of the figure) is the same.
>
> TILLIS 1999, 190

Based on his discussion of stop motion animation, Tillis argues that the moving images of the film medium generate the movements of the otherwise static stop motion puppets and accepts both formats—real-time/puppet-driven and non-real-time/image-driven animation—as puppeteering practices. This brings the frame-by-frame renderings of digital animation closer to the world of puppetry.

If Tillis concentrates on the performing puppet object, Kaplin is interested in the relationship between puppeteer and puppet. He maps this along two axes—ratio and distance:

> By "distance" I mean the level of separation and contact between the performer and the object being manipulated—beginning at the point of absolute contact (where performer and object are one) and running through psychic, body, remote, and temporal degrees of contact. "Ratio" refers to the number of performing objects in comparison to the numbers of performers.
>
> KAPLIN 1999, 32

Both axes may be used in digital puppetry as well. For example, the ratio value in the above-mentioned re-enactment of Burdon's *Shoot* is 1:1, while a gameplay recording of a *Starcraft* (1998)[D] tournament would feature a Many:1 ratio, meaning that multiple puppets are controlled in parallel by a single performer (in collaboration with the game engine, as we will discuss below). This maps onto game design traditions that often allow players to either control a single hero—as seen in most first-person shooter games, including *Doom* (1993), or in online worlds, including Second Life—or to control multiple characters in simulation games, including real time strategy titles such as *Rome Total War* (2004). Machinima productions are directly affected by these control schemes. A *Doom* recording shows the mastery of a player in the performance of one character and depends upon groups of players to collaborate if more dramatic roles need to be fulfilled. Gamecasts of *Starcraft* matches display the performance of the player spread across the whole assembly of characters under their control and one's expertise in addressing any evolving situation on the game map.

While a 1:Many ratio—whereby a single puppet is controlled by multiple puppeteers—may be found in a range of traditional puppet traditions, such as Bunraku, it is practically non-existent in machinima. Games may feature collaborative actions and shared goals in a cooperative gameplay mode, but players still remain in control of their characters. In this case, the goal-driven

nature of games acts as a limitation to a potentially rich control scheme and again highlights the distinction between a goal-oriented game design and an influence- or expression-oriented performance. As player avatars turn into expressive canvasses and traditional puppets accept their digital counterparts, the question, then, is how these digital puppetry systems provide for the necessary range of expression.

Digital puppets and procedural animation

> If, as a creator, you have a nonlinear, interactive narrative structure, but it is embodied in such a way that acting is essentially nonexistent, then there is no way to create emotional buy-in for that character—the willing suspension of disbelief by the audience in that character's existence.
>
> PERLIN 2004, 17

Control schemes of goal-driven videogames have been geared to affect something in the game world, not to influence an onlooking audience. At the same time, as animation systems have become more elaborate, games aiming for a "nonlinear, interactive narrative structure" (Perlin 2004, 17) have equipped many of their virtual characters with richer visual expressions. To include this higher level of animation detail, they primarily employ procedural animations. The animated behavior of the earliest videogames, like *Spacewar!* (1961) or *Pong* (1972), provided a direct mapping of player input onto the virtual character. The spaceships in *Spacewar!* or the gaming paddles in *Pong* had no additional animation other than those controlled by the player. In these cases, the performing virtual object was completely dependent upon the player's input, but this changed with more advanced graphics. Even simple game characters started to display their own computer-controlled animations, such as the chewing of Pac Man; the moving of Mario's legs and arms; or the curling up of Sonic into a rotating ball. All these expressions are automated, while players control only the directional movements. As ever more expressive animations were added to newer generations of game characters, the control scheme became less direct, resulting in modern characters having automatic idle animations which play while no user input is received and maintain the illusion of an independent character "alive" on screen. While this partially answers Perlin's call for believable characters in modern videogames (Perlin 2004), a rift opened between direct mapping and the growing influence of the procedural animation (Tomlinson 2005). Fundamental expressions in traditional puppetry, such as making a puppet "breathe," shifting weight, or directing its

gaze, are now often either non-existent or procedurally generated by the game engine and not available to human controllers at all. Brody Condon's machinima piece, *Karma Physics < Elvis* (2004),[E] concentrates on this point of automation, showing countless Elvis characters floating in space spastically twitching as the game engine's physics system affects them and mimicking Presley's famous dance move—all without any direct animation input from the creator.

The role of procedural animation is one notable differentiation between machinima and traditional CGI animation. While CGI animators carefully craft facial animations for their virtual characters, a game series such as *Halo* (2001), home of the successful machinima series *Red vs Blue* (2003–present),[F] merely provides basic head control, hides the face of the character underneath an opaque combat helmet, and does not allow for customized facial animation control or import. However, *Red vs Blue* is heavily dialogue driven, utilizing the little control over the head's movements to suggest speaking, as its avatars lack any moveable jaw. Advanced animation systems like *Spore* (2008)[G] pushed procedural body animation to the next level, as did *LA Noire* (2011)[H] for facial motion capture, but they both notably lack any control scheme for the player to affect the details of these new animation technologies directly and in real time. The level of expression and animation during gameplay improves and allows for more detailed machinima cut scenes, but real-time control of these new features remains problematic.

Thus far, we have discussed the principal connection between puppetry, game controls, and machinima. But to respond to the challenge of control, we now review how the control schemes of videogames allow or restrict certain expressions in digital puppetry. This will help to identify how we can establish effective control over the advanced virtual puppets that our avatars have become in machinima productions. Our goal is not to provide a complete historical overview of the myriad different mappings of controllers and game expressions. Instead, we pick particular examples to elaborate on key conditions—some classic for machinima's development, others still borderline cases but with the potential to shape machinima's future. While the selection is clearly limited, it aims to support our argument for the role of digital puppetry as expressive technique for machinima performances.

Early first person shooter (FPS) controls

The control scheme of early first-person shooter games, such as *Doom*, was originally laid out for keyboard input. They allowed for mouse and trackball controls but saw those as advanced options:

> TIP: When you're comfortable playing the game, try using the keyboard and the mouse simultaneously. The mouse provides fine control for aiming your weapon (allowing you to smoothly rotate right and left) while the keyboard permits you to activate the many useful functions of the game.
>
> original README for the *Doom* shareware 1993

The shift in control is reflected in their interface layout: the original control scheme for movement in *Doom* made use of the arrow keys, positioned on the right side of the keyboard. When right-handed players switched to mouse controls, this original arrangement was less than optimal. Eventually, a different default—the WASD button assignment on the left side of the keyboard—emerged to suit the new set-up. But some limitations of a keyboard-based approach remained. The most important restriction was the view of the virtual character as a token, an object to be controlled. In that sense, it mirrors the second main genre responsible for the early wave of machinima: flight simulators. Both formats treated their main characters as objects to be manipulated in their rigid completeness by the player. These early predecessors of machinima served as gameplay documentation, allowing players to learn from the in-game performances of expert players such as Chris "NoSkill" Crosby or the speedruns produced by the *Quake done Quick* (1997)[I] community. Performance here is understood as goal-oriented gameplay optimization or "high-performance play" (Lowood 2007) that documents certain play techniques. Artistic expression in machinima pieces such as *Quake done Quick* did not emphasize the characters' emotions or a fictional storyline, but the optimization of completing the game and the "spectacular human play" of a play that "is as close to a 'proper' run through *Quake* as we believe it is possible to get" (Bailey cited in Lowood 2007, 17). Accordingly, one does not affect the object itself but its relation to the surrounding world. During real-time control, the virtual character remained largely a singular object that could be moved and activated, but allowed for very little direct influence on any particular section of the body. Even when filmmakers changed the context and added their own narratives—as seen, for example, in *Diary of a Camper* (1996)[J]—their actions remained limited to those provided with in-game activities. The performance remained framed by the set gameplay and puppet control remained framed as gameplay control.

Gamepads

Traditional console games and gamepad controllers, like those for the PlayStation and Xbox 360, might offer new interface technologies, but the

predominant interaction design often limits character control to the same levels of the keyboard and mouse combination used in first-person shooter games. Depending on the system, a gamepad's joysticks may provide analog input, with some buttons being even both analog and pressure sensitive, but they are rarely used to directly affect elements of the virtual puppet for more advanced expression control. Occasionally, fighting games assign a button on the controller to a taunting animation without direct fighting benefits. Expressions, such as a specific gesture, may be triggered, but the resulting animations and performance, once activated, are not controlled. It may be interrupted by another animation, but not, for example, shaped to a player's preference.

One example of a different—and distinctly console-based—approach is the game *Little Big Planet* (2008).[K] The original *Little Big Planet* game was released exclusively for the PlayStation 3 (PS3) and its control scheme was optimized for this system's game controller, which features a directional pad ("d-pad"), two joysticks, numerous buttons (some of them analog), as well as accelerometers and, depending on the generation of controller, vibration. The primary gameplay mechanic in *Little Big Planet* involves running, jumping, and grabbing, leaving nearly 10 controls available for functions that are not essential to playing the game. The developers assigned several of these to character expression. Each direction on the d-pad, when activated, cycles through the degrees of a different emotion. For example, pressing the "up" button once gives the character a slight smile and relaxes its hand positions, and twice changes the smile to an open mouth smile and opens the hands. Left, right, and down function similarly and correspond to fear, anger, and sadness respectively. The ability to change expressions and move different body parts independently from pre-rendered animations by pressing specific buttons in combination with the corresponding analog stick also gives players a range of expressive control not commonly found in games. *Little Big Planet* emphasizes creative input from players. It encourages players to create their own levels as part of its core gameplay and character customization is simple but deep. Likewise, gameplay includes non-critical moments during which players can discuss plans, meet online, or simply, so to speak, goof off. Thus, the expressive potential is valuable during a form of gameplay that fosters creative expression next to goal-driven game design and it provides a promising hybrid. The gamepad does not map directly to the character's body and we remain "distanced" in Kaplin's framework, but the degrees of freedom it offers allow for expressive control of a virtual character and turn *Little Big Planet* into a digital puppetry platform.

In that respect, *Canada* (2010)[L] is instructive in how it utilizes the flexible level creation tools of the game as well as the live puppeteering of the characters to tell its tale. Scenes are created using the level editor for use

in establishing shots and montages. Reaction shots show clearly emotive expressions, and the puppeteers use the ability to control the characters' body language to add to the emotion of particular scenes. For instance, at the climax of the film as the characters realize they are about to be incinerated by a barrage of nuclear missiles, the film cuts to reaction shots of each character in turn. Each character is screaming, and has its hands shaking and held out in front to show extreme fear. This pose is achieved using the mouth-open frowning face provided by the game and the ability to move the characters' arms with the analog sticks.

In a different way, *LittleBigRevenge* (2009)[M] makes use of composites between character animations recorded in *Little Big Planet* and actions and settings in the real world to tell its story about a sackboy taking revenge for the accidental death of his lover caused by a careless gamer. In the piece, a sackboy couple comes into the real world after being wished for by a gamer. When the game characters leave their screen world, they run around excitedly exploring their new world. As they are small, tables and sofas appear as game levels to them. By capturing animations of the sackboys in the game's level creator and then compositing the animations with footage from the real world, the film brings the virtual puppets into the real world. The interplay of real actors with game characters which had previously been under the actor-player's control creates particularly expressive character relationships and adds a new potential use for game engines in machinima production. The further irony of the set-up is underscored by the game character using the digital immateriality of games to get his revenge as he "pulls out" animated weapons from game discs with which he vanquishes the gamer who had squished his lover. In this machinima, the game engine is a production tool rather than a storytelling medium.

These machinima works differ from machinima produced in other user-generated environments (such as Second Life) not because their environmental storytelling techniques are better, but because their character control system is one of direct puppet control as opposed to the play-back of scripted animations. The affordances of the particular controller are applied in an advanced format, which distinguishes between different body parts and input methods, allowing for an expression-based control scheme instead of the gameplay-goal-oriented scheme that dominated the *Doom* example above.

Motion controllers

The Wiimote, while providing buttons and a d-pad like a traditional gamepad, uses movement as its primary input mechanism. Many Wii games still use

the Wiimote like a traditional game controller which maps button presses onto actions taken by the game characters. However, games like *Wii Sports* (2006) use the Wiimote as an abstract representation of an object in the game world. The controller represents, for example, a bowling ball or a tennis racket. This mapping leads to a more embodied interaction scheme in which the player physically enacts the movements required to control the object in the game world. The avatar's movement does not directly mimic the movement of the player; rather, the object's movement is determined by the forces applied to the controller, and the avatar performs a pre-rendered or procedural animation. In this case, expressiveness is not something consciously controlled in the game engine; it is enacted by the players in the real world. The game acts as encouragement or justification for the actions. It is part of the fun to see other people perform their play moves. However, due to the functionality of the Wiimote, the expressive enactment in *Wii Sports* remains optional. In fact, the game does not require players to perform dramatically in order to play the game: the best Wii bowling players sit on a couch and flick the controller in a way that perfectly controls the necessary input to the accelerometer to get a strike. The puppeteering effect plays out as a tool-like control over a virtual object, which is merely a means to achieve an in-game goal. Performance and expressiveness are not an integral part of the represented game world. Instead, they are a side-effect of play and the better one becomes in achieving the game goals, the more this expressive play form shrinks to mere optimized functionality.

The Wii controller has been successfully hacked and used in numerous puppet projects, but as a gameplay device it follows the tradition of the gamepad, adding a new dimension to the game controls but not to the control of expression. For machinima, the Wii controller indicates a first turn of focus from the virtual stage to the physical play space. As reflected in the original advertisements for the Wii, which did not rely on in-game footage but instead only showed the reactions and behaviors of the players in front of the screen, the Wii controller directed the attention outward. If play as performance and expression is situated in the physical as well as the virtual world, then a machinima capturing the full experience necessarily has to embrace both spaces—a development that we argue is growing increasingly important.

Body as interface

Microsoft's Kinect offers another approach to embodied control schemes for gaming. The Kinect is a computerized vision-based, unencumbered motion

capture system that tracks the position of key parts of a player's body. Like the Wii controller, the Kinect has been hacked and used in numerous puppet-like projects, but the focus here remains on actual game-based controls, which are far less geared towards the abstraction of puppeteering. For example, in *Dance Central* (2010),[N] the player is presented with a sequence of dance moves that must be performed in time to the music. The moves are essentially a series of poses that the player must strike in time to the beat. In this case, enacting the movement is essential to the game. Furthermore, the actual positions and movements of the player's body are mimicked by an avatar in the game world, offering a degree of expressive potential in the game world as well as in the real world. That is to say, a player can dance with a particular style, see that style enacted by the avatar, and still do well in the game.

Even with such a fine degree of control over the avatar, the Kinect's and *Dance Central*'s shortcomings as a puppetry controller come from the way the primary performance is mirrored from the real world. All spectators of a *Dance Central* performance share the same real-world space as the player, and the avatar's movements match the player's movements exactly. As such, the Kinect operates like a virtual mirror that reflects the player onto the game world. Not surprisingly, then, gameplay videos of Kinect sessions often either include an inlay screen that shows the movements of the player in the physical space or blend the video taken by the Kinect with some other virtual environment. We thus see an unwitting merger of machinima film practice in the recordings of the on-screen action and traditional live filmmaking in the videotaping of the dancers in front of the Kinect. This merger documents the necessity to include the physical body/puppet in the performance. It also supports the close relationship between machinima and performance art (see also Nitsche 2011).

This blending of performance and hybrid machinima arguably becomes most obvious in *Yoostar 2* (2011),[O] which positions players in existent film scenes by compositing their performance in front of the console into prefabricated video backgrounds. Because the video allows for a high level of detail in facial expression—and in certain modes of the game also for bodily expression—it can produce rich results.

However, the Kinect also lacks the abstraction of animating a virtual character. Direct mirroring can also be a restriction. In the case of Dance Central this manifests in the predefined poses that need to be struck. It lacks the level of abstraction available in puppetry, where an essential quality is the difference between the puppet performance and the human performance. In his seminal text *On the Puppet Theater*, von Kleist argues that, due to the physical differences between the human body and the puppet body, it is "absolutely impossible for the human being to compete with a puppet" (von

Kleist 1811, 3). It is precisely because the Kinect maps physical movements onto the virtual body that the technology lacks the key quality of puppets that detaches them from (or, following von Kleist, makes them superior to) human actors. Therefore, while the Kinect does have the potential to support in-game expressivity, its current focus on mimicking the player's movements, as seen in the example of *Dance Central*, does not utilize the full potential of puppetry.

Having said that, when applied well, the mapping of the controls—as seen, for example, in *Child of Eden* (2011)[P]—can position the player into a new relationship with the virtual world, where players' body motions such as reaching and pushing are mapped onto the abstracted game world to evoke a symbiosis between the physical and the virtual. Such a symbiosis can stage players themselves as puppet-like interfaces into the game space and stimulate an almost dance-like collaboration between player and avatar. Twisted Pixel's *The Gunstringer* (2011)[Q] more directly utilizes the puppet metaphor in its game and interaction design. It not only includes puppetry as a central theme to the underlying game narrative, but its Kinect control scheme also allows players to manipulate a virtual puppet with one hand, while the other is used as a "gun" representation. *The Gunstringer* certainly mimics puppet controls but it also limits the way they can unfold. The navigation of the game world is pre-set and moves the character on a given rail. By splitting the control scheme and including an embodied "gun" metaphor, the mapping stages the player and not the puppet as the "shooter." Ultimately, it also stages the puppet itself as a game object. The virtual hero is thus presented as a performing character (even watched by a virtual audience), albeit *what* is watched is not necessarily the subtlety of the character's expression but—once again—his performance in pursuit of the game's set goal.

A game-based machinima for a control condition such as this calls for inclusion of the physical co-performing player body and necessarily breaks the frame of the virtual world, including living-rooms and play situations next to dance floors (*Dance Central*), Western scenarios (*The Gunstringer*), or abstracted polygon fantasies (*Child of Eden*). Machinima recordings, in this case, are not limited to the game world but can encapsulate the whole play situation as the player body as interface puppet becomes an integral part of the performance shown.

Body armatures

Thus far, this overview of control scheme examples for real-time animation has remained in the gaming domain. To outline possible future developments for real-time puppeteering set-ups in machinima, these final sections

present control mechanisms that derive from film and theatrical productions. While these methods are not yet widespread in game design and machinima production, they reflect high-end productions and experimental cases of machinima productions, including motion capture for game-based animation as seen, for example, in The Strange Company's[R] *Death Knight Love Story* (in production) which blends motion capture animation with *World of Warcraft* (2004) and hybrid machinima toolsets such as *MovieSandBox* (2010)[S] which is based on Open Source 3D animation.

One form of motion capture that has been used to animate both physical and virtual puppets makes use of armatures worn by a human performer that are equipped with sensors at key points of articulation. Known as Waldos (a term that has been trademarked by The Character Shop, a California-based special effects company), these devices are used to control virtual as well as animatronic puppets primarily in film and TV production.

One of the earliest Waldo-controlled digital characters was Waldo C. Graphic, a 3D animated fish controlled by a glove-like input device (Walters 1989). The puppeteer could see the digital character change in real time, superimposed over live video of the physical puppets, which gave her a fine degree of control over the performance. Detailed rendering effects were applied in post-production, after the performance data had been captured and cleaned. Some of Jim Henson's Muppets were also Waldo-controlled, and a similar approach was used in the "Elmo's World" segment at the end of *Sesame Street* (1969–present) episodes, in which traditional Muppets and a virtual set of animated characters consisting of animated furniture (chairs, tables, doors) performed together in real time. This resulted in a puppet-based mirror image of the above-discussed hybrid machinima formats which record gameplay and human performance alike.

More recently, the PBS series, *Sid the Science Kid* (2008–present),[T] uses advanced Waldos to control animated characters in real time. Conceptually, *Sid the Science Kid* represents a professional real-time machinima production, even though it depends on professional animation packages rather than game engines. While its controls are the closest to live puppeteering it lacks game-based specifics, from a set environment to technical limitations that come with the reuse of a game system. Instead, it evolved from the television-based puppet approach developed by Jim Henson and not one based on scripting and game engines like the machinima systems of *Moviestorm* (2008)[U] or *iClone* (2006)[V]. It serves as an example for a real-time puppeteering system which focuses entirely on the level of expression with no underlying pre-implanted in-game goal. This allows for a very different collaborative control set-up: one puppeteer wears a suit which combines computer vision and sensor data, and controls the character's body and limb movements,

while a second puppeteer controls the character's face and mouth with a hand-controlled interface. Notably, this is an example of a single virtual character controlled by multiple puppeteers, or a 1:Many mapping.

If the generic game controllers tend to a simplified object-control model, and the visionbased approach of the Kinect presents a kind of digital mirror, real-time Waldos and exoskeletons emphasize the detailed animation of each body part. One moves a puppet's joint physically to adjust its virtual counterpart's animations "live." However, this specificity comes with a price. The skeleton structure has to correlate to that of the virtual character. High specificity allows for finer control, but also limits the general usage of a single interface for different virtual characters.

Tangible puppets

A variety of custom-designed physically embodied control devices have also been used for digital puppetry, many of them with a form factor which closely mimics that of the virtual character they control. Drawing on concepts from an emerging HCI research area known as tangible and embodied interaction[W], these control devices may be best described as tangible or embodied puppet interfaces. They fit Tillis's own category of "tangible puppets," but remain input devices that feed into a virtual system. Compared with the more generic kinds of controllers described above, tangible puppets more closely relate to the design and techniques of traditional (non-digital) puppets and puppetry.

Like exoskeletal armatures, tangible puppet interfaces typically capture the movement of the puppet's limbs or joints using sensor technologies, and map these data onto the virtual character in real time. For example, in an interface system called *Swamped!*, a plush chicken toy was used to manipulate and control an interactive story character in a 3D world (Johnson *et al.* 1999). Our own work on tangible puppets has also sought to create interface devices that can afford direct control over the joints of the virtual character, while remaining simple enough to enable real-time interaction. We have experimented with different puppetry approaches. For example, our first puppet prototype presented at the Machinima Film Festival in New York called Cactus Jack[X] was a simplified version of a traditional marionette (Mazalek and Nitsche 2007). Its head and arms were connected via strings to a control paddle, which was manipulated by the player in order to move the puppet's body and raise or lower its arms. Data from sensors in the arms and paddle were mapped onto the movements of a virtual toy cactus in the *Unreal Tournament* (2004) game engine. Our more recent work includes a

hybrid puppet interface which combines features from traditional hand and rod and full body puppets (Mazalek *et al.* 2011). Machinima productions with these controllers work like live puppet performance shows. When we used the system to perform *Pictures at an Exhibition* (Mazalek, Nitsche, Rebola, Clifton *et al.* 2011)[Y] for the Experimental Puppetry Theater at the Center for Puppetry Arts in Atlanta, the performance and manipulation of the physical puppets was as important as their effects on the abstracted virtual world projected in the background. The piece itself only works in combination.

Comparable approaches grew out of the machinima community. Some machinima producers, such as Chris Burke for *This Spartan Life* (2005–present),[N] remain dedicated to the underlying game environment (in his case the *Halo* game series (2001–present)) and use the gamepad and keyboard control option for their live puppetry. In contrast, Friedrich Kirschner implemented a multi-device puppet control system into his *MovieSandBox* toolset to allow for detailed control of character animation in real time, which he used in live machinima shows such as *The Bob Block Show* (Kirschner/Scholz 2005–6).[AA] The ILL Clan utilized specialized off-the-shelf hardware to control their virtual puppets for *On the Campaign Trail with Larry and Lenny Lumberjack* (2003–2004). All of these machinima production systems lend themselves to live performances which can include audience participation (*On the Campaign Trail with Larry and Lenny Lumberjack*), unexpected in-game interventions (*This Spartan Life*), and expressions on the level of the tangible puppet interface itself (*Pictures at an Exhibition*). These examples of digital puppetry in machinima thus offer their own expressive ranges which differ from many other practices, such as scripted or pure gameplay recordings. They allow real-time responsiveness with other (often physical) performers, direct manipulation that allows for immediate experimentation, and numerous specialized interfaces which optimize access to this manipulation (especially compared to scripting environments used in other machinima production systems).

One particular addition for tangible interfaces is the role of the controller as part of the performance Tillis originally considered tangible puppets to be expressive through their appearance. Their bodies would be manipulated and thus express a certain animation. The tangible puppet interfaces outlined here differ from the exoskeleton approach above exactly because they offer their own inherent expressions. They not only provide input data, but can themselves become tools for expression, such that the performance of the physical puppet/interface stands next to that of the virtual character. The resulting machinima videos reflect the importance of the puppet controller herself. The interfaces at work remain input devices and thus facilitate a kind of dual performance: that of the puppet as a physical and expressive object in

the real world and that of the virtual character in the digital space manipulated by the sensors implanted in the controller.

Conclusion

We have demonstrated that puppetry is a key performance element for machinima as the expressive use of the virtual character's actions replace the goal-oriented design of the underlying videogame. Applying Tillis and Kaplin, the connections between these forms of real-time puppeteering and traditional puppetry arts were discussed. These parallels support connections between traditional puppetry and virtual characters, and help us to gradually position machinima as one form of digital puppetry in relation to other established formats (like Bunraku) and fringe formats (like stop motion).

While some of the control schemes outlined here are not—or not yet—widely used in machinima, they illustrate available alternatives and possible future routes for real-time animation control. The challenge remains in harnessing the ongoing changes in machinima through creative practice. There are countless mappings of interfaces onto ever-evolving game designs and our outline of different stages of interface developments is obviously selective. But it clarifies the tension between specificity of control and the necessarily generic design of game devices which, in its design of game interfaces and the use of procedural animations, allow for high accessibility and a low threshold for player-performers, but restrict higher level control.

Notably, as the level of expression recorded and fed into the virtual character becomes increasingly fine-tuned, the input device itself becomes more accentuated, and operating it ultimately becomes a performative act in itself. This pushes performance further into the physical world. The role of the interface as a performative object thus becomes apparent and often develops into a key element of the machinima production. As the input devices form to become expressive puppets, they highlight an unexpected parallel: puppetry performances in the digital world have a counterpart in the physical world as the player-performer engages with the interface at hand. Although we started off with a clear view of the performance of virtual puppets on game stages for machinima, this discussion of puppetry and control systems helps us realize how important the physical "input" side in this form of machinima production has become. Puppetry is thus not only a powerful approach to understanding the way players express emotions and stories through virtual characters, but in this new way also frames the creative physical activity of the players. As interfaces provide us with new opportunities to experiment with this

relationship between player and virtual puppet, we shape the player's performance as much as that of the virtual puppet. In that way, we can return to Tillis's question quoted earlier—"What is the puppeteer?"—and rephrase it as "What is the player?" in the puppetry condition.

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5

Facing the audience

A dialogic perspective on the hybrid animated film

Lisbeth Frølunde

Introduction

This chapter explores machinima as a "hybrid animated film" and applies dialogic theories on language inspired by the Russian literary philosopher M. M. Bakhtin (1895–1975). My aim is to theoretically explore the development of what I term "hybrid animated text" in the combination of animation and live action, and its implications for an audience. I suggest that hybrid texts, as exemplified by experimental films blending machinima with live action footage, or by mainstream movies such as *Avatar* (2010), are evolving rapidly. Such hybridity poses theoretical challenges. For instance, as every text builds on all previous texts or, as Bakhtin (1981) proposes, is intertextual, hybridity has to be understood as an aspect of all texts. Yet the increasingly popular

blend of live action and animation is relatively unexamined, with notable exceptions.[1] The meaning-making processes of filmmakers and audiences in this respect of hybridity thus have to be studied further, with the underlying grand theoretical issue being how humans build or make meaning (semiosis) on the basis of previous experience or knowledge, a problem I wish to discuss here with respect to the hybridity of machinima.

This chapter proceeds in the following way. I first discuss the terms *machinima film*, *hybridity*, and *modality*. Next, I present dialogic theory, particularly the three Bakhtinian concepts of *heteroglossia* (multiple voices in dialogue), *genre* (continually evolving compositional form), and *chronotope* (modeling of time and space in a text as well as mental models). I then apply these concepts to analyses of hybrid machinima films which integrate live action with scenes recorded in Second Life (2003) (SL), in particular using Bente Milton and Mikkel Stolt's work, *My Avatar and Me* (2010), to synthesize Bakhtinian concepts in machinima practice. In addition, I review concerns about the further evolution of machinima as raised by film director Peter Greenaway (2010) and filmmaker Friedrich Kirschner (2011) in light of Bakhtin's views on new media and textual forms. Finally, I reflect on the utility of taking the dialogic approach to understanding machinima.

I find it important to study machinima within Bakhtin's theoretical framework (1981) because he provides rich ideas and presents convincing arguments for studying novel texts such as machinima. Bakhtin looks at culture as bonded with literary history, including old and new traditions of oral speech and storytelling. He considers emerging linguistic practices which appear in the margins of mainstream culture as important for linguistic polyphony and evolution. Bakhtin would thus presumably treat a phenomenon like machinima with philosophical importance because it is at the core of the dialogic—it embraces the idea of multiple voices, authorial positions, and uses of humor (satire, parody) in dialogue with each other. The contemporary machinima landscape, with its various online communities such as YouTube channels and DIY (do it yourself) filmmaking websites, can thereby also be seen as having semiotic richness. In alignment with dialogic theory, I argue that novel forms of text, such as machinima, are relevant for understanding linguistic and cultural evolutions, and may even propel them.

Machinima film

I suggest that machinima demonstrates a "novel" form of film in that it seems new (and thereby unfamiliar) to many audiences to watch interactions from virtual worlds (VW), computer games, or graphic simulation platforms

as constitutive of a film. One may be familiar with machinima by playing one's favorite computer game, or following particular machinima filmmakers, or browsing on YouTube. The variety of genres, the level of attention to editing, and the distribution channels within machinima film are growing and giving rise to successful entrepreneurship (see Haefliger *et al.* 2010). Yet machinima films still often relate directly to their genesis in computer games or VWs in static and documentary ways.[2] For instance, the series *Freeman's Mind* (2007–present)[A] made in the first-person shooter game, *Half-Life* (1998), is filmed from the viewpoint of a player named "Freeman" (the filmmaker Ross) with a voice-over narrator verbalizing the player-character's thoughts. There is little introduction or meta-story about the *Half-Life* game world as a story world, which is now transformed into a setting for the film series. To that end, Henry Lowood (2009) helpfully distinguishes between two kinds of machinima: (1) "storyline machinima," where "libraries of game texts," among other resources, are used to create machinima with new or alternative narrative elements and story arcs; and (2) "archival machinima," which documents high-performance gameplay for historical purposes. The latter, unsurprisingly, has strong referentiality to the game.[3] As Lowood points out, the problem with this referentiality to games and their story worlds, whether with *Half-Life, World of Warcraft* (2004), or a VW, is that such a machinima film may be inaccessible or simply uninteresting to an audience unfamiliar with its game world. An archival approach may thus be said to be less likely to propel linguistic and cultural evolution because it, so to speak, dialogues with itself, rather than experiments with linguistic conventions and codes, and pushes towards renewal in a dialogic sense. Although I am enthused by the potential within machinima film, I also call for renewal, experimentation, and greater diversity in line with Greenaway's (2010) and Kirschner's (2011) arguments.

Hybridity

Hybridity is discussed by Bakhtin in his essay, "Discourse in the Novel," with regard to devices in the novel for creating the "image of a language" (one of the devices being what he terms *hybridization*). I base my understanding of hybridity on the following definition:

> [A] mixture of two social languages within the limits of a single utterance, an encounter, within the arena of an utterance, between two different linguistic consciousnesses, separated from one another by an epoch, by social differentiation or by some other factor.
>
> BAKHTIN 1981, 358

Bakhtin describes hybridity as including *intentional* artistic devices (such as a text or a film). My analytic interest lies mainly in such intentional use of hybridity, which possesses—an issue I want to raise again later—a consciousness and perception of that hybridity. The dialogic perspective on intentional hybridization "illuminates" how an "image of a language may be structured only from the point of view of another language, which is [temporarily] taken as the norm" (Bakhtin 1981, 359); in other words, how one language "sees" another language.

My use of the term *hybrid* also refers more broadly to crossing generic compositional conventions and frameworks for texts. Such hybridity includes, for example, media convergence (Jenkins 2006) and how machinima remixes content and distributes it across a range of media platforms, as well as the importance of specific sub-cultures, such as those of SL or *The Sims* (2000), for machinima as a textual practice. Further, I take inspiration from Lev Manovich's suggestion in his article, "Image Future" (2006), that future visual forms belong to hybrids of moving images emerging from new techniques which blend traditional animation, cinematography, and computer graphics and which go beyond special effects.

I thus adapt the term particularly with respect to hybrid forms of animation and live-action film footage as either blended in almost seamless ways, or which deliberately show their seams in the editing of the real/surreal. In a later section, I refer to such representation of the real and the surreal (or the "realistic fantastic," which "in no way… exceed[s] the limits of the real, here-and-now material world" (Bakhtin 1981, 150)) and discuss how this is constructed textually in a film, such as in the integration (the intersections or juxtapositions) of different genre conventions. My interest is to explore the explicit integration of parallel worlds shown in films, combining live action and animated machinima footage that offer plays within plays. Hybridity as such is not a new concept. Rather, it reiterates earlier notions, such as "bricolage," in relation to film editing and the perception of continuity in a film.[4]

Modality

Modality is a key idea in social semiotic frameworks (which includes roots in dialogic theory). Kress and van Leeuwen (2006, 154–9) refer to modality as degrees of truth in a representation, such as a film. The modulated "truth value" of a representation is a crucial issue in communication as it involves the question of message reliability. For example, to establish the degree of modality of a particular representation, an audience may be asked whether and to what degree they think about (1) what they see or hear is true, factual, or real; (2) how

it presents the world; and (3) whether it is a lie, a fiction, or something outside reality. At one end of the modal continuum lies the animated surreal which conveys meanings close to the imaginary, the dream-like, and the fantastic. This end, in most instances, would include avatars and machinima. The other end of the modal continuum relates more directly to physical and bodily senses of presence in reality and how the moving images of "live" or real actions of characters approximate truth value to a larger degree. This "live-ness" can convey meanings relatively closer to our "flesh-and-blood" bodies in present time. Thus, animated and live footage are essentially different in modality, but both are "merely" representations of lived life.

Yet the hybridization of the animated and the live may offer an audience a sense of dissonance (Kress and van Leeuwen 2006) through the comparative, even perhaps contradictory, representations of imaginary states along a continuum of "truth value." Along similar lines, Pat Power (2009, 113–14) applies the social semiotic idea of modality to the coding of animation, but he focuses on the potential in an *expressive* approach to animation that relies on emotional and sensory appeal, rather than the oft-used realistic (or hyperrealistic) stylistic approach of animated special effects and mainstream computer-generated imagery (used so extensively in films such as *Avatar* (2010)). In comparison, I focus mainly on modality as degrees of truth represented differently through the animated (produced as machinima) and live action in the same film text.

Dialogic theory

According to Craig Brandist (2001), as well as Michael Holquist (1981) in his introduction to *The Dialogic Imagination*, Bakhtin's use of references and influences is notoriously left wanting, obscure, or muddy. Despite this, I have selected three main Bakhtinian concepts—*heteroglossia*, *genre,* and *chronotope*—for discussion here due to their relevance for understanding the hybrid film text and especially the hybridity of animated machinima and live action.

Heteroglossia

Heteroglossia refers to the presence of multiple voices or many expressed viewpoints in a literary text or other artistic work. Bakhtin (1981) privileges heteroglossia and the interrelatedness, or what he also calls inter-animation, of voices that are in continual dialogue within texts, between people, and

within individuals and texts. Heteroglossia also refers to the use of multiple languages or "glossaries." A "glossary" is a set of signs in one linguistic system which is nevertheless open to change and adaptations from other glossaries. For instance, the English language adopts words from foreign languages; however, those adopted foreign words may also attain different meanings in English.

This linguistic diversity co-exists in a state of tension and competition. It also relates to the motions and transformations of meanings in a text. According to Bakhtin, the use of parody based on an earlier text, opening up different and humorous meanings, is one example of such transformation as texts move or traverse across semiotic contexts and interplay with other texts. For instance, avatars involved in a romantic encounter in a VW may not be considered humorous per se. However, the machinima film of such a romantic encounter may transform the event into a comic or tragic one, or even a parody of contemporary cyberlife. These motions and transformations are an aspect of heteroglossia and part of the "novelization" or renewal of language. As Bakhtin (1981, 7) writes:

> [L]anguage [of "novelized" genres] renews itself by incorporating extraliterary heteroglossia and the "novelistic" layers of literary language, they become dialogized, permeated with laughter, irony, humor, elements of self-parody and finally—this is the most important thing—the novel inserts into these other genres an indeterminacy, a certain semantic openendedness, a living contact with unfinished, still-evolving contemporary reality.

Meaning-making processes in a dialogic approach therefore refer to a complex dynamic of introducing new literary forms and layers of meanings into the interplay between audiences and authors. In this respect, the emergence of linguistic subcultures and popular events that celebrate the carnivalesque—the carnival as viewed by Bakhtin as a kind of event present in all cultures, formed by attitudes, conceptions, and signs (verbal and nonverbal)—are also significant and are treated with philosophical importance.

Heteroglossia is therefore a useful concept for pointing out how marginal cultural practices and non-canonical forms of language, such as machinima, expand linguistic systems and celebrate the comic, the profane, the absurd, and the carnivalesque. A subsequent section will further discuss how multiple storytelling traditions potentially preserve multi-voicedness and why experimentation is urgently needed with regard to the ongoing transformation of language. In particular, I will apply heteroglossia to traditions of storytelling, carnivalesque visions, and contemporary hybrid animated text as exemplified in machinima.

Genre

As Agger (1999) and Gardiner (1992) point out, Bakhtin is influential in developing the notion of genre in relation to everyday verbal communication due to the attention he paid to how all human activity involves our use of language. Language is realized in the form of what Bakhtin (1981) terms our concrete "utterances" or speech, including oral and written utterances. He asserts that, although there is a wide range of individual peculiarities, some stable types of utterances are nevertheless formed, which he calls primary and secondary "speech genres."

Secondary speech genres are mainly in written language and emerge as comparatively more complex and more developed forms of cultural communication, such as dramas, novels, and literary commentaries. Primary (or simple) speech genres relate predominantly to verbal communication in terms of oral, everyday speech, although they would also include casual and personal writing such as letters and messages. These genres enter literature or other texts in forms such as spoken dialogues, casual correspondence between characters, or other forms that resemble everyday speech. Secondary genres take shape from, or may be said to absorb, primary genres. Each culture and epoch has particular and unique speech genres which set the tone for the development of literary language. This continual shaping may also be called the organization, structure, or composition of text, and is in part therefore also a function of genre: "a sequence of functionally related actions corresponds to the sequential semantic structure of the text … which we call its genre structure" (Lemke 2009, 284). Lemke also suggests that *action* itself may be seen as a semiotic resource system, whether the action is movement, gesture, musical performance, dance, etc. On this understanding, I argue in subsequent sections that a machinima film text, constituted of performative actions by avatars as well as recording actions by the machinimator, is likewise an organized genre structure similar to a puppet play.

Chronotope

The chronotope is a complex notion laid out in the essay, "Forms of Time and of the Chronotope in the Novel" (Bakhtin 1981). It refers both to time and space in a text and to being a mental construct or schemata. The notion of the chronotope includes our perception of temporal development as seen to be structured by our lived, sensed life, experience of death in nature (the four seasons), and people (1981, 232), as well as how space and time are

composed in a literary text, offering its reader parameters of space (or place), and time (a framework for the story, plot, and characters).

Bakhtin describes various types of chronotopes that are determined by different historical tropes in literature, such as "adventure of everyday life," "the idyllic," "chivalric romance," "the Rabelaisian," "biographical time," and "the folkloric." Tropes overlap, so one type does not necessarily exclude another. We as the audience recognize the main tropes, and thus know and anticipate different events, characters, and actions in, for example, an adventure as compared to a romance. Tropes also underscore myths and, in subsequent allusions to these myths, intertextual references. The adventure trope, for example, references the Greek epics of hazardous journeys or quests, such as Homer's *Odyssey*, with its metaphorical models of travel along a road as "the path of life." The chronotope thus generally encompasses narrative actions by a character as well as basic narrative events like journeys taken by characters involving motifs such as "meeting/parting (separation), loss/acquisition, search/discovery, and recognition/non-recognition" (Bakhtin 1981, 97). Bakhtin further discusses how space and time relate to such motivic elements, which may be termed as the form language of space and time in relation to the central or core meanings in a text. For instance, he is interested in the motivic elements of the chronotope of *meeting*: "Quite frequently in literature the chronotope of meeting fulfills architectonic functions: it can serve as an opening, sometimes as a culmination, even as … a finale.... A meeting is one of the most ancient devices for structuring a plot" (1981, 98).

I elaborate here on the "intervalic chronotope" (Bakhtin 1981, 163–6), which refers to the parameters of hybridity because the trope highlights intervals that interrupt the main or dominant trope. It exploits the potential for dialogically interacting chronotopes to refer to and comment on a main chronotope, sometimes repeating a dominant trope in a disguised form. Bakhtin writes that the intervalic chronotope is "at the heart of" the *Tristram Shandy* series by Laurence Sterne (1759–69) wherein "Sterneanism is the style of a wooden puppet directed and commented upon by the author himself" (1981, 166). Bakhtin terms this a subtrope, "entr'acte," or "theatrical space" (1981, 163). A contemporary example would be the film *Being John Malkovich* (1999), whose intervalic puppet scenes show its live-action characters as puppets (marionettes). In an entr'acte scene, the protagonist Craig, a struggling puppeteer, is working on puppets of himself and Maxine, a colleague with whom he is infatuated. The puppets are shown seated on the edge of a small stage as Craig manipulates them, giving voice to his own puppet and impersonating Maxine's voice. The dialogue includes Craig (as Maxine) asking: "Tell me, Craig, why do you love puppeteering?" Craig

replies (as Craig): "Well, Maxine, I'm not sure exactly. Perhaps it's the idea of becoming someone else for a little while. Being inside another skin. Moving differently, thinking differently, feeling differently" (Kaufman 1999). At the end of the scene the puppets kiss. The film then cuts to a live-action scene, where Maxine rebuffs Craig, saying: "You're not someone I could get interested in, Craig. You play with dolls" (Kaufman 1999; see also Child 2010). The juxtaposition of puppet and live-action scenes serves as a commentary on the intervalic use of puppets in the film composition and reveals Craig's inner life, such as his fantasies about Maxine. The audience are thus made aware of how puppets show different facets of the characters. Entr'acte is also used in the structure of *Being John Malkovich* in other ways, such as how characters temporarily enter and manipulate the body of actor John Malkovich, who also plays himself as a well-known movie star. In these ways, the film creates intervalic, intertextual layers of comic farce.

Contemporary linguist Bart Keunen proposes that, while Bakhtin's notion of genre is fluid, the chronotope is relatively stable in terms of how an audience comprehends or interprets a text. In that respect, Keunen discusses chronotopes as "memory schemata" (2000, 3), and suggests that they are not purely formal phenomena concerning text, but also refer to an audience and their knowledge and experience of other texts. These memory schemata may be seen as occurring chronotopically on two levels: the level of textual motifs (the *thematological* dimension of texts); and the level of fictional world models (the *genealogical* dimension) and how models are understood. The first level is a sort of common denominator or semantic structure of a text (i.e. it has to do with the motifs, available themes, or meanings which are structured or composed in the text itself). The second level relies on genealogy (intertextuality) and is viewed as a pragmatic, superstructural function or mental model (i.e. it refers to the audience's mental models about the character's actions in time-space), or "mental constructions that take shape in the pragmatic interaction with texts. Although time and space are embedded in texts, they do not unite until they enter the minds of concrete writers and readers" (Keunen 2000, 5).

Overlaps in the concepts of *genre* and *chronotope*

Finally, I wish to underline that the chronotope is in a dynamic relation to genre and that there is considerable overlap. Genre refers to fluid structural models of texts—they work implicitly by means of mnemonic associations (patterns

that assist memory such as the linking of letters, objects, and ideas together in associations) employed by any text producer and audience. Apropos of Keunen (2000, 10), the chronotopic may be seen as a comparatively stable cognitive system whereby we (as audience) recognize the invariant semantic structures within all sorts of literary texts. The invariant aspects of the chronotopic as mental models thus aid us cognitively in distinguishing between evolving genres (Bakhtin 1981, 250, also 84–5). This view also appears in line with the spirit of Bakhtin's phenomenological and pragmatic roots.[5]

Dialogism applied to understanding hybrid machinima film

There are many examples of hybridized animated and live-action films, such as *Pan's Labyrinth* (2006) by Guillermo del Toro, which interweaves live action placed in the aftermath of the Spanish Civil War with an animated fantasy world or parallel "space" of an underground labyrinth; and *Waltz with Bashir* (2008), an animation film documenting Ari Folman's search to recover lost memories from the 1982 Lebanon War, whose final scene represents the lost memories with live action.

Machinima also experiments with hybridity. For example, *A Journey into the Metaverse* (2011) by "Tutsy Navarathna" (a French documentary filmmaker living in India who goes only by his avatar name)[8] documents his journey of "meeting himself" both in India and in SL. His film synopsis on YouTube states that it is "a metaphorical tale, questioning relationships established between reality and virtuality through our avatars and the play on the double meaning of the word 'avatar' referring to its original Sanskrit meaning of a spiritual quest." In the film, the live-action shots set in India appear dream-like. Although the film's edits between animated and live scenes are visually distinct, the mix of the two creates a sense of a closely intertwined hybrid, a fused realistic fantastic. In part, this mix is achieved through the presented point of view, where we are told a compelling story and see life in India through the filmmaker's lens, yet we only see the storyteller represented as Tutsy, the filmmaker's avatar in SL.

In comparison, Douglas Gayeton's *Molotov Alva and His Search for the Creator: A Second Life Odyssey* (2007) integrates very little representation of physical bodies or settings, as all scenes are located and recorded in SL. In the film, an avatar named Molotov Alva, created as a representation of the filmmaker, undertakes a journey through SL as the character attempts to leave what he calls "his earthly body" and "Californian home." The series

includes photographic stills floating in a gallery space in SL, which the filmmaker and narrator Gayeton calls a "memory garden" depicting the past "real" life of the avatar, and is used to tell about his longings for a kind of cyberutopia. Gayeton is thereby taking up aesthetic and philosophical issues of virtual worlds (Gayeton 2011; Horwatt 2008)[C]. Both films explicitly address a spiritual search and highlight physical and sensory experience as an aspect of that search. In similar ways, the two machinima films create dissonance through hybridity in, for instance, how the films do not present their actual, live narrator as physical actors, but instead use autobiographical narration related by an animated character. I suggest that the lack of the physical actor serves to create a dissonance between the truth value of the unseen narrator with a compelling tale, and the surreal visuals in the distinctively unpolished SL graphic style.

My Avatar and Me

FIGURE 5.1 *Poster for the film* My Avatar and Me *showing the main character as"real" and as avatar. Photo credit: DOX:BIO, Danish Film Institute.*

The full-length feature film *My Avatar and Me* (2010)[D] is written and co-directed by Bente Milton (Milton Media ApS) and Mikkel Stolt (Fenris Film and Multimedia Productions ApS). The genre of the film utilizes the documentary style of a field study. However, the film is a fictionalized story about experiences in SL, specifically about exploring ideas of presence, relations, emotions, identity, spirituality, and even reality, based partially on the phenomenon of VWs (such as SL) and visions of the changes in society related to information

technology. The main character is Mikkel Stolt, a struggling, small-time documentary filmmaker working on ideas about time who lives with his partner Helle. He hears of SL and, hoping to earn money there as a filmmaker, enters the virtual world as his avatar, Mike Proud. The film therefore shows two Mikkels (Figure 5.2): the filmmaker Mikkel Stolt recorded live in the "real world," and the filmmaker/avatar Mike Proud recorded in machinima set in SL.

FIGURE 5.2 *Mikkel versus Mike (video grabs)*

The plot revolves around Mikkel/Mike's romantic interest in another avatar, Helena. When Mike enters SL, he cannot find friends and is discouraged. Befriended suddenly by Helena at her SL dance club, Mike is introduced to Helena's avatar community in SL, after which he starts his filmmaking business and meets other avatars, including Helena's friend, photographer/filmmaker Rob Danton. As Mikkel starts to become romantically interested in Helena, his attraction is extended via his avatar, Mike, towards Helena in SL. The dual personae of Mikkel/Mike are thrown into relief as they pursue their common romantic interest. In the physical world, Mikkel communicates with Helena through e-mail correspondence. In SL, Mike and Helena use written chat. At one point they even attempt to have cybersex (Figure 5.3).

FIGURE 5.3 *Machinima film scene of Mike with Helena in SL (left). The characters also communicate via SL written chat, e-mail, and photos (right) (video grabs)*

However, Mike becomes jealous of Helena and Rob's friendship, resulting in Helena leaving SL. Mikkel then travels to Paris (where she once told him she lives) to search in vain for Helena. Towards the end of the film, Mikkel has an emotional breakdown resulting from various traumatic events, including his real-life partner throwing him out of their home, so that he ends up living in his office. The film shows increasingly blurry boundaries between his life as an avatar and as a live character, as well as a budding spiritual search. The breakdown is represented by visuals and sound which indicate the disrupted, difficult relationship between Mikkel and Mike (Figure 5.4).

FIGURE 5.4 *Split screens and transparent layers of a hybrid Mike/Mikkel examplifying the relationship between them (video grabs)*

I argue that the concepts of heteroglossia and intertextuality apply to *My Avatar and Me* in two ways: first, the mixing of machinima scenes with live-action footage to represent carnivalesque comedic visions; and second, the presence of multiple voices in the film to convey the numerous texts to which it alludes. *My Avatar and Me* has many comic and ironic twists whereby the novel layers of machinima as a language become dialogized, permeated with laughter, irony, humor, and self-parody of the carnival. For instance, a machinima scene in which Mike is shown attempting to have virtual sex with Helena is cross-cut with live action scenes of Mikkel's inability to control the avatar animations, so that he is unable to show the sexual arousal of his avatar and, by extension, "perform." This creates an absurd and comic show of events parodying the vulgarity that might be associated with cybersex. In addition, the machinima film sequences intertwine with live action shots in a way that shows Mikkel becoming increasingly involved emotionally in an experience of parallel worlds. For example, the film explicitly shows multiple perspectives of Mikkel's conflicts, such as when Rob comes to visit in Copenhagen while Mikkel is having a breakdown. Their dialogue about experiences in SL offers their various emotional reactions about the events unfolding in the machinima scenes. Furthermore, Mikkel's own internal,

multiple voices, using his dialogue and the voice-over about his thoughts and reflections, frequently offer intertwined perspectives.

The use of voice-over by Mikkel starts and finishes the film, but it is also mixed with spoken dialogue in live-action scenes. As the title reveals, *My Avatar and Me* concerns interpersonal and intrapersonal dialogic relations which the film iterates by incorporating multiple points of view about the journey into SL portrayed through machinima. However, the machinima is framed by live-action dialogue, such as in the scene where Mikkel recounts his story to Rob and his regrets about how he has treated Helena (avatar) and his partner Helle. I thus argue that the machinima scenes and the avatar Mike are at "the heart of" (as Bakhtin writes about the puppet scenes in *Tristam Shandy*) *My Avatar and Me*, and function as "entr'acte," or "theatrical space." The point of view of Mikkel (his subjectivity) is also reminiscent of the approaches within modern documentary and mockumentary (comic, mocking) genres, where we see the documentary filmmaker in front of and behind the camera, and hear his or her voice-over narration commentary.

Multiplicity is also shown in various ways in the film. In an early internal working paper, the directors noted ideas of using intertextuality, in particular to use "references… as [a] means for making the film entertaining and self-aware in a good way." They refer to "humorous inclusions of quotes, music and similarities with myths, books and films," such as *Pygmalion/My Fair Lady, Orpheus in the Underworld*, and Goethe's *Faust*. They highlight the inspiration of *Pan's Labyrinth*, particularly how it switches between "parallel universes" throughout the film. *My Avatar and Me* similarly creates its own hybridity of sign systems for showing multiplicity of spatial and temporal realities. For example, SL machinima scenes are shown to co-exist temporally with live events in Mikkel's life, such as when his partner Helle interrupts his activities in SL by reminding him about a dinner date, calling him back to the here and now of real life. The film therefore explicitly presents and reflects on the seams between SL's and the physical world's space and time. Narrative or plot and communication in different spaces or film locations is contextualized and explained to the audience, such as by the use of voice-over narration in the machinima scenes.

The use of visual juxtaposition in the scenes simultaneously showing Mike and Mikkel (Figures 5.2 and 5.4) highlights the boundaries between the two characters, creating a sense of dissolution or doubling of Mikkel's self even as they are, so to speak, one and the same (the avatar-live character dynamic in the film is open to interpretation). In all these ways, the film demonstrates a multi-voiced, playful hybridity. This composition makes an audience aware of modality as a mix of the realistic and the fantastic by juxtaposing live action against the surreal and the animated. In this way, the film shows the complex

relational dynamics between avatars, and in the relationships between "real" flesh-and-blood characters and their avatars. All in all, the film guides an audience into SL via Mikkel's journey using comedy and self-parody to pose existential questions about where the seams are between our real lives and online lives, and about what is true, false, or real. The film's organization or construction of many voices and its condition of production and editing as assemblage are thereby revealed and commented upon in the film, and also form underlying themes in the film.

The concept of genre is also in play with regard to the use of stylistic conventions in the film, such as its mix of speech genres. The primary speech genre relates to everyday speech and to spoken dialogues in the film between live characters and among the avatars in SL, such as in the form of written SL chat and e-mail. The integration of these new forms of primary speech genres into the secondary genres of film (drama) demonstrates how the primary is altering the shape of the secondary. This is underlined by how Mikkel reacts to SL chat by verbalizing chat dialogues (talking to himself) and retelling them to other real characters. Mikkel is also the narrator of the film, which adds a meta-level of Mikkel as the omnipotent storyteller (as well as filmmaker/doubled film character) explaining events which occurred in the past. There are, therefore, dialogically interlaced layers of speech genres. The film exemplifies the unique speech in a culture such as SL, but also contextualizes it in a way that an audience can associate with other kinds of chats and messaging (via Skype, computer games, SMS, etc.).

At this point, I speculate whether an audience unfamiliar with SL or machinima may find the genre conventions and glossaries of SL confusing, whereas an audience more familiar with SL conventions and the speech genres of our digital culture (and who have had experience playing/being an avatar, playing videogames, etc.) may understand the genre conventions and grasp the humor more readily. In that respect, I argue that machinima which does *not* refer to its own construction may risk becoming closed, static, and self-referential (to be elaborated in the next section).

Finally, I argue that the dialogic notion of the chronotopes is used in the film to highlight two issues: first, how the adventure trope of a journey is represented; and second, how the thematological and genealogical dimensions interplay in the film. With respect to the journey trope, the film clearly draws on our recognition of it as a familiar narrative structure of time and place, and as a metaphor for our personal odyssey or quest to find our life paths. The film uses the narrative potential of travel to compose the story, so that an audience will recognize its different stages: Mikkel's point of departure as a somewhat failed filmmaker; his voyage into SL as Mike; his encounters on his metaphoric life path in SL and relations to others as Mikkel/Mike; his

crisis; and finally his subsequent return as Mikkel, although perhaps changed emotionally by the experiences from his journey. In my interviews with the two directors of *My Avatar and Me*, they talked of their differing intentions of the film and particularly of its ending. During editing, Mikkel Stolt recounted how he saw the character Mikkel/Mike as related to "Carl Barks's Donald Duck," whereas Bente Milton and the editor wanted the main character to develop, change, and learn. Stolt's response was telling: "to learn something? I said, no, it's a comedy. Donald Duck, does he ever learn anything? He doesn't really, does he?" Stolt clearly preferred Mikkel/Mike to remain more of a Donald Duck character, a comic clown who does not "learn" and develop. He suggests a view of characters more typical of the clumsy fool, the clown who expresses his naiveté as a "struggle against conventions, and against the inadequacy of all available life-slots to fit an authentic human being," the classic "synthetic form for the (parodied) exposure of others" (Bakhtin 1981, 163).

While viewing the film, an audience may also compare the temporal and spatial categories of different types of texts (genres) and recognize the adventure or journey trope (such as from Homer's *Odyssey*). In so doing, an audience may also use mental schemata or "superstructures" to organize the meaning of the film and even to anticipate its actions and plot. In other words, we bring or carry cognitive invariants across different types of texts, such as literature, plays, etc. The film also leverages our understanding of semantic continuity in film editing to create a hybrid film which uses machinima as a means to represent contemporary, existential quests or journeys. The main character Mikkel "meets himself" through his avatar Mike with a motif (or theme) about being on a journey into new space. Hence, it offers a recognizable universal story about how a person enters into a new situation exemplified by SL as a world. In this world, Mikkel/Mike strives to meet others, has conflicts, and ultimately reconciles with others and himself. This adventure trope is familiar, perhaps too familiar. Yet *My Avatar and Me* creates a new layer of meaning about human/avatar intertwining using the shifting hybrid space-time parameters by, for instance, mirroring the film locations in SL with physical locations, and by doubling avatars with live characters. The meeting points between the mirror worlds include representations of Mikkel's actions of connecting to SL, such as the dramatized way Mikkel uses a special head-set that reads brainwaves so as to direct his avatar Mike (Figure 5.2). It thus tells stories about crossing virtual and physical locations and what that does to human consciousness, imagination, and ethics. Yet it also uses a Donald Duck-esque character who, at least in part, pokes fun at himself as storyteller. Our paths in cyberspace are thereby shown as aspects of our complex journey of life.

Second, the thematological and genealogical dimensions interplay in the film by its use of familiar genre conventions in its composition. I suggest that this mix of old, familiar genres and new hybridity activates an audience's mental models such as that of "entr'acte," or the "theatrical space" trope known from puppet theatre, but here applied to machinima puppet play. The film thus demonstrates a high degree of dialogic interwovenness and intertextuality between the use of machinima with live-action scenes. By using a clear semantic structure (until a somewhat abrupt shift in the ending), it supports the construct of dialogic mental processes of the audience. It also provides a sort of genealogy of film and VW history with, for instance, references to different genres in filmmaking achieved by showing Mikkel filming documentaries in real life and starting a filmmaking business in SL. In addition, as Mikkel "plays SL" and enters cyberspace, the film creates associations with our everyday travels and identities in digital online "spaces" of various kinds. The adventure trope applies as a model for understanding our personal lives as an existential voyage that follows a temporal and spatial path. This path takes us in and out of multiple spaces, including cyberspace. In this way, the use of machinima in *My Avatar and Me* thus actively utilizes an audience's mental schemata about journeys and activates our associations about cyberspace and our visions of new futures, both dystopic and utopic.

Machinima's evolution

Despite the relative ease of creating machinima films (with or without hybridity with live action) in a technical sense, there is still concern about the general lack of diversity and experimentation in machinima culture. There are not many works which experiment with intertextuality in the ways discussed above. Obviously, my selection of examples is from the professional end of filmmaking. Nonetheless, I argue that there are grounds for concern about the evolution of novel approaches to machinima.

Filmmakers such as Peter Greenaway (2010) and Fredrich Kirschner (2011) raise relevant points about the potential for more cross-fertilization and diversity in artistic expression. From socio-linguistic, cultural, and historical perspectives, we have a genealogy of literary works which include animation and artwork. Yet, the aesthetic potential for dialogic hybridity is not leveraged. Greenaway (2010) calls for experimentation and approaches beyond the narrative style of "the book" to pay more attention to the visual dimension of storytelling. Machininima's use of real-time animation and accessibility *potentially* pushes the envelope of "new" or novel forms of expression and

authorship, as Greenaway (2010) asserts in his opening speech as juror at the 2010 *48 Hour Film Project Machinima* contest:

> Certainly the phenomenology of the machinima would be of considerable importance... I suppose, rising out of game shows, game vocabulary, associated very much with all the excitement, certainly for me, is Second Life and all it means.… It has created a new arena, a new playground, a new examination of ways and means which we can express ourselves in the world.
>
> at 10–11 min

He reiterates an enthusiastic yet critical view on the technical and aesthetic potentials of machinima as a new medium for expression.[E] As a strong advocate of experimenting with machinima, Greenaway states that he is "disappointed" about how the potential of machinima is actually being explored (or not). Rather, he raises the importance of using machinima more experimentally beyond just copying earlier structures (or genres), but also of trying out the new, or the novelistic, in terms reminiscent of Bakhtin. He states that machinima as a new medium has yet to find its own unique ways and means of expression and encourages machinima filmmakers to use the unique affordances of machinima, such as the spatiality in this "new medium":

> So utilize, I would suggest, the full vocabulary of the potentiality of the new medium… in Second Life, that sensation of space—it is a medium without gravity, for God's sake. Just think what you can do without gravity. So it is a medium about space, it's a medium about mutability and change.… So—use the characteristics of the new medium, and in practice, find out what they really are. And lay down the groundwork, essentially, for something, which is not cinema, it's not video, it's not even some extenuated idea of the notion of the animated painted image. It has great new potentiality for a huge future.
>
> at 13 min

In the same vein, Friedrich Kirschner (2011) highlights how the stylistic and narrative aspects used in both traditional and computer-generated animated stories seem overlooked by machinima filmmakers. He suggests that the general lack of diversity in machinima is due to a paradoxical attachment to contemporary videogames and simulation platforms, and that it hinders development of variety in the visual style, narration, and structure of machinima films. He points to two issues: first, that a machinima audience makes associations to videogames; and second, that machinima filmmakers usually refer to live-action film, yet use videogames with their style, narrative,

and culture. With regard to the second issue, he believes the reason is that "the machinima community generally perceives itself as consisting of filmmakers—as in live action filmmaking—and not of animators" (23). Kirschner connects the lack of diversity in machinima filmmaking to the lack of attention paid to "the stylistic, narrative and production methods used in both traditional and computer-generated animated stories." As a result, machinima filmmakers "miss out on a heritage of visual variety not found in live-action movies" (23).

Greenaway and Kirschner both suggest a need for liberating machinima from a generally conservative narrative and compositional style, and encourage exploration of the rich history of animation and cinematic effects. They express disappointment in machinima in terms of creators' unwillingness to experiment with form and narrative, and offer arguments in support of the need for training and chances for development: Greenaway highlights "visual literacy" and the power of images; Kirschner proposes using animation traditions with their excellence for creating abstraction.

In light of these issues, I argue for the evolution of machinima by way of using the dialogic approach for understanding machinima. Machinima has affordances of real-time animation and intertextuality for experimenting with hybrid animated texts which are not fully leveraged (yet), but may lead to re-definitions and re-inventions of what machinima is now. In that respect, it has potential as a form and practice in terms of creating new genres and re-conceptualizing the boundaries between contemporary media platforms. Moreover, it demonstrates the continual evolution of language. From a socio-cultural linguistic perspective, a monologic tendency of standardized forms of meaning-making affects its evolution of language and culture. From a dialogic perspective, the diversity of heteroglossia is privileged, as it is interesting and necessary for cultural development. This is because humans continue to need alternative types of stories, such as those about quests and journeys in cyber-space, in order to further understand our culture and ourselves. Hybrid films interweaving machinima and live action, such as *My Avatar and Me*, can offer just such alternative multiple viewpoints on our life journeys, viewpoints I find lacking in highly self-referential machinima. Machinima offers unique ways to represent the animated because it utilizes animation's characteristic illusion of breathing life into inanimate things or representations, such as avatars.

Conclusion

Bakhtin's dialogic approach, with all its ambiguities, aids in the consideration of the complexity of voices within texts, within the viewer or reader, and

between texts. From this perspective, not only do the audience draw on all their previous and current experiences, but the text (such as a machinima film) also refers to all previous and current texts. In this respect, the rich notion of the chronotope is relevant for theorizing machinima's genesis in the special temporal-spatial matrix constructs of videogame worlds, with concomitant motivic elements and genre conventions related to games, VWs, and cyberspace. I also find it useful to explore the pragmatic and cognitive-psychological basis for dialogism in relation to conceiving machinima texts and the meaning-making processes of its audience. I argue that the concepts of heteroglossia, genre, and chronotope apply to the theoretical challenges posed by a hybrid animated film text about meaning-making. They help develop understanding of how humans structure historically and textually very divergent semantic elements by employing a sort of textual superstructure.

In this chapter, I have attempted to integrate complex dialogic perspectives which relate to various theories on language, psychology, and philosophy. There are obviously many other approaches, and much further work has to be done to grapple with meaning-making. I hope that my use of a Bakhtinian dialogic perspective, supplemented with contemporary interpretations, has at least served to untangle some of the very complex processes involved in meaning-making.

Notes

1 Recent authors and filmmakers who consider animation production in relation to cognition, hybrid aesthetics, art philosophy, and cinema history include Maureen Furniss, Lev Manovich, Pat Power, Charles Forceville, Javad Khajavi, Mimo Ito, Friedrich Kirschner and Peter Greenaway.

2 Although note that there are also plenty of counter-examples, such as Friedrich Kirschner's experimental machinima *The Journey* (2004), made in *Unreal Tournament* (1999), which barely refers to its computer game, as it was so heavily modified during film production.

3 Machinima as "archives" refers to an alignment with a given story world and game engine (see Lowood 2009). I argue that such machinima which mainly document the game history and performances within a given storyworld may become static for an audience, especially for an audience that does not know the particular game's storyworld. Lowood's notion of machinima production as "libraries" refers more to film and theater performances, but are performances in a computer-generated space of some kind, whether or not this space is recognizable to an audience or follows the given story of a "computer game."

4 Lori Landay offers an interesting film historical perspective regarding constructing point of view with a virtual camera used in machinima in her "Virtual KinoEye" article (2009).

5 Bakhtin names some of his influences, including Socrates, Immanuel Kant, and Suzanne Langer. My inspirations include John Dewey's pragmatism and Mark Johnson (2007), who discusses schematic structure of human development that starts with the embodied and visual, resonating with approaches of Bakhtin, Dewey, Keunen, and Bartlett.

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6

Dangerous sim crossings

Framing the Second Life art machinima

Sarah Higley

Machinimas could stamp their newness on the world by demonstrating they could be frameless.

PETER GREENAWAY 2011, n.p.

The first film I submitted to the Second Life Machinima Artists Guild's online social network (MAG)[1A] was called *Write Me* (2010), mercifully stricken from YouTube. A girl, my workaday avatar, stands in a blank, semi-transparent book asking pretentiously, "Why won't someone write me?" The camera pans around a landscape covered with calligraphy. The sim, rented in Second Life (2003–present), was one I had devoted to an exploration of

Chaucer's *The Pardoner's Tale*: I had textured the ground with an image of a medieval manuscript. Partly, I was lamenting the monumental task of finishing it. In retrospect, I was "writing" about my introduction to machinima in which suitable subject matter had yet to be framed. It was a kind of filmmaker's block where I was stymied by the *tabula rasa* of Second Life itself.

In this chapter, I examine the Second Life machinima that frames the Second Life 3D art build from what is called "the inside out" (i.e. a filmmaker's acclimation to the social network in which she participates and then transforms in her representation of it). The terms "inside out" and "outside in" will be clarified below as they relate to the concept of the frame, with which I shall begin. I use this word "frame" to mean several things. Obviously, every photograph and film clip has a border called a frame inside which one situates a visual composition meant to be seen, and many artworks displayed in Second Life, shown in virtual museums with virtual frames around them, are no different. But every sim in Second Life—indeed every parcel—has a boundary as well that one could think of as a frame around a theme meant by its tenants to be experienced, whether that theme is artistic, educational, commercial, or private. Parcels can be cordoned off by ban lines which prevent strangers from entering and sounds from "leaving" and disturbing neighbors. Estate managers of independent regions (islands whose borders don't touch other regions and thereby avoid the dangerous "sim crossing")[2] can provide unique textures to their landscape into which one must teleport. The platform of Second Life itself is also a vast frame, something your avatar enters and leaves, edged by your monitor screen which displays your avatar inside it with so many others. The social world in Second Life with its artists and filmmakers is a contextual frame too. And finally cinema itself is also a frame—a box, a century, a context in which the machinima (a misspelled "cinema") awkwardly fits.

I focus on this concept of frame largely because, in an inspiring moment for Second Life machinimatographers, the experimental filmmaker Peter Greenaway came inworld as Tulse Luper and told us to dispense with it. Can machinimatographers, he asked in two guest lectures given in Second Life, leave the cinema frame behind and set off in a new aesthetic direction, or is machinima still too new or too mired in the past to make that leap forward?[3] His remarks were both praised and criticized: praised for the seriousness with which he regards Second Life as an artistic tool, and criticized for being uttered from the "outside," from his perceived position as a foreigner to this intimate world and disdainful of the various conventions of Second Life machinima.

Speaking of the foreigner, then, "inside out" and "outside in" are terms used to describe two different modes of interaction and rendition that bring

a social as well as a technological element to concepts of the frame, and describe a kind of "crossing." Most definitions expand on the distinction first articulated by Paul Marino in his blog article "Machinima From the Inside Out" (removed): the player's internal experience versus the filmmaker's external story (see his interview with Paul Green, 2006).[B] Michael Nitsche writes in "Claiming Its Space" (2007) that "'Inside-out' refers to game players using machinima as expression and recording of their play" whereas "'Outside-in' stands for the use of game engines as tools for traditional animation and story-telling independently from games." Likewise, in "Machinima's Promise" (2011a), Friedrich Kirschner defines the "inside-out" approach as one where machinimas are made by players who want to exhibit creations made within their beloved game and the "outside in" as one where presumably more expert "film directors and animators with little or no connection to a specific game" use its technology "to bring their unique ideas to life" (20). One who is outside the game and its social bonds is also outside the frame, no matter how adroitly she films using its platform. But to be "inside" the game risks being too close to the environment one films, and Kirschner notes that the average game machinimatographer is reluctant to stretch further out from the inside: "Why did machinima never grow up and free itself from its connection to the video game industry?" he asks (20). Kirschner, however, is a machinimatographer who works primarily with external animation programs.[4] Greenaway poses the question from a different sector: Why don't you Second Lifers free yourself from cinema? Kirschner urges machinimatographers to think in terms of animation and not capture—to work from the outside in; Greenaway urges them to think in terms of image and not cinema—to work from the inside out, but in ways that challenge the conventions they have been employing (narratives, opening and closing credits, speaking parts, lip syncs, and so forth). It seems that whatever machinima is doing it cannot find itself yet, in or out. And because Second Life is so eclectic, it offers the most generic confusion.

Second Life machinima is growing by leaps and bounds, a fact that Dan Pinchbeck and Richard Gras foreground in their recent chapter (2011) as does Kate Fosk, who writes that it "pushes the boundaries of video art" (30, 2011). It is significant that Greenaway chose to address Second Lifers specifically in a heartening avowal of its opportunities. Machinima.com is still the most prominent site for viewing machinimas, but it is heavily game-oriented, categorizing its films according to platform, and Second Life machinima has poor representation there. With respect to lifelike avatar animation at present, Second Life falls far below other animation programs. This fact makes the representation of realistic human activity a challenge and requires a thorough knowledge of all the work-arounds. I maintain that, unlike

the external production of machinima in software programs made for single users, the immersive culture of Second Life is vital to the experience of its art and filmmaking. The successful Second Life art machinima, which seeks to make the work of its artists visible to non-Second Lifers, is not readily amenable to the outside-in approach; a user must know where the interesting environments are and interact with its makers, and know enough about the platform before changing what is captured in the frame. One of the obstacles to the popularity of Second Life is its bland, suburbanite sprawl. There is, as many have noted, an embarrassingly "kitsch" quality to Second Life, not because of its commerce and kinky sex, but because of the initial Disneyland look of it (especially as advertised on its website). Much of it at first glance is an uncanny valley of fake grass, Miami beaches, shopping malls, and shadowless houses displaying their mimetic deficits. However, Second Life is also a place for democratic engagement—a place, as Wagner James Au puts it, "equally suited for finger painting and Monets" (2008, 53), where over 90 percent of its content is user-created. Consequently, it shows tremendous contrast in style, and it is also becoming one of the most versatile sets of frames around cutting-edge digital art, much of it submitted to inworld contests, some of it developed as entire environments not merely for the user's immersion but deliberately for a genre of machinima that is freeing itself from the mimetic. The term "art machinima" is hardly exclusive, since making any kind of machinima experiments with a nascent artistic medium. In this chapter, however, I focus on what Pinchbeck and Gras dismiss in their focus on narrative (147): the film that captures and modifies the "object-building skills" of its surrealist creators**,** emphasizing the work of art in the age of posthuman fantasy—along with its fragility and changeability.

Finding the frame

"The task of any discussion of frames and framing in the visual arts," writes Paul Duro in the introduction to *The Rhetoric of the Frame* (1996, 1), "is first and foremost to counter the tendency of the frame to invisibility with respect to the artwork. We see the artwork, but we do not see the frame." All the essays in his edition address the *parergon* in artwork throughout the ages, a term used by Immanuel Kant ("beside-work") that Jacques Derrida re-defines in the following description: "neither work (*ergon*) nor outside the work, neither inside nor outside, neither above nor below, it disconcerts any opposition but does not remain indeterminate and it *gives rise* to the work" (Derrida 1987, 9; emphasis in original). For Derrida, as Robin Marriner (2007)

puts it, the frame is part of the wall when you are looking at the painting and part of the painting when you are looking at the wall: "The frame of the work marks or effects the divide between the work and that which is exterior to it, yet within our understanding and response to the work this boundary or divide between what is internal to the work and what is outside of it becomes invisible" (357). How does the *parergon* work with respect to film, the most mimetic of our media, and the most immersive before the advent of the videogame? Derrida's supposition poses an interesting synergy (and paradoxicality) between the immersion of Second Life and the machinima made of it at the same time that it foreshadows the "inside/outside" distinction. Filmmakers on the "outside" look upon the virtual world and seek to reframe it. Builders on the "inside" of the virtual world look to the filmmaker to represent it. Second Life strives for the visual illusion of boundlessness, best achieved on continents and clusters of islands that are connected. However, one still has to deal with the perilous meeting of two sims where a crossing can abruptly change one's visual and aural effects, and the perilous intrusion of the user interface, especially when it malfunctions. We have a ways to go before we achieve the Metaverse in *Snow Crash* (Stephenson 1993), and yet we adapt to the frame, render it invisible, and fall into our surroundings.

Second Life machinima puts the frame back around the invisible frame of immersion at the same time as it participates in it. Machinima in general has provoked a storm of inquiry and philosophizing about the nature of the "real" that is being captured by a digital camera in a digital world.[5] Mike Jones (2007) speaks of the film camera and the game camera as distinct: the title of his article, "Vanishing Point," cleverly incorporates both the artist's term for giving the illusion of distance in painting and the disappearance of the "frame-based arrangement of visual elements in cinema whereby the position of subject is dictated by the position of the [built-in] camera" (226). For over a century, the camera has sought to replace the eye in traditional film, directing our gaze in order to suggest a "natural" view of things traditionally staged unnaturally, whereas it becomes the "I" of the player as he or she directs the camera willfully around the environment. The virtual camera Jones speaks of is the one built into the latest videogames, which "moves beyond" the physical camera and its fixed focal point into "new conceptualizations of space and the viewer's connection to, or immersion in, it" (228). The center, the vanishing point, and consequently the frame changes along with one's virtual point of view like and yet unlike the "long-take," in ways that may have influenced filmmakers like David Fincher: Jones compares the POV of the videoplayer to the eerily itinerant camera in *Fight Club* (1999), which becomes "an entity *occupying* space rather than an entity *of* the space" (236; emphasis in original). Few users in Second Life consider the built-in "cam-controls" a

"camera." They are merely part of the interface. But the Second Life panopticon takes seeing to an extreme: the eye/I can detach from the avatar to which it belongs and pass through walls and underground, making privacy laughable, and laying bare any secrets around the corner. Lori Landay (2009) echoes Jones's observations in her references to Dziga Vertov's "KinoEye" where she examines virtual subjectivity in Second Life.[C] This KinoEye and its dislocated POV is more easily utilized in machinima than in traditional film, and it is in this sense that Derrida, Jones, and Landay make Greenaway's comments about machinima, frame, and virtual experience more perspicuous than they were to a number of us at the time.

Given his involvement in Second Life machinima, Greenaway was invited to judge the May 2011 biannual machinima contest sponsored by the University of Western Australia (UWA). When asked about the possibilities for machinima, he declared that along with the actor, the text, and the camera, the film frame is one of the four "tyrannies" of traditional cinema that should be eliminated:

> [W]e must dump the idea of THE FRAME—the frame—like the story does not exist in nature. . . . There is essentially no frame, for example, in Japanese painting before it choose [*sic*] to imitate the West… no edges, no margins… it will be a big visual revolution to change the frame—all our digital devices have been lazy and too convenient for the money-makers. …When you think about it—the frame scarcely ever has any effect on the image or the content of the image. Painters have told us about the frame edges in the 20th century—but few filmmakers ever thought about the frame edge and therefore the frame limit… we can certainly start by pushing that frame around—changing its aspect ratio, proportion, shape—demonstrate that it can be a living thing.
>
> GREENAWAY 2011, np[D]

Frame as both "living thing" and something to be "dumped" struck me as contradictory. Greenaway's presence as one of the judges added a great deal of prestige to MachinimUWA III and produced a measure of angst among those of us who had already submitted our films to its themed contest. Being told that "text" should be abolished inspired a long list of rebuttals, and his advice about the machinima frame seemed muddled. However, it inspires useful questions about film and *parergon*. At present, the frame for conventional film is the theater itself. For online videos it is the page—the areas around the screen where the filmmaker writes about the film, viewers comment, and the sidebar advertises other films. The machinimatographer is generally advised to stick to a certain aspect ratio—16:9—and leave no

black bars around the standard YouTube or Vimeo screen, despite the fact that our software allows us to do exactly that. Dispensing with the frame perhaps means exposing what is invisible—our unquestioning acceptance of the standard screen size in both conventional film and machinima—and providing instead a margin for subtitles and peripheral imagery.[6] Dispensing with the camera perhaps means dislocating it from the conventional focus on the subject in the way that Second Life allows.

Frame as image features prominently in Greenaway's own early work: in *The Cook, the Thief, His Wife and Her Lover* (1989), the interior restaurant is overshadowed by a large sixteenth-century painting of Franz Hals's wigged officers of the St. George Militia Company seated at table.[E] The story in *The Draughtsman's Contract* (1982) revolves around a literal-minded artist who draws everything he sees through his viewing grid while being "framed" as the murderer of the husband. In *Prospero's Books* (1991) and *The Pillow Book* (1996), multiple frames are visual elements (text framed separately from scenes, clips superimposed over others),[F, G] and *A Zed and Two Noughts* (1986) is about a physician obsessed with the painter Vermeer and fitting his patients, often gruesomely, into *tableaux vivants*. How do we reconcile these early films with the "abolished" frame and the praise he bestows on the immersive experience as art-form? In his opening comments at the awards ceremony for the 48 Hour Machinima Contest (headed by Second Life machinimatographer Chantal Harvey), Greenaway scolded the contestants, much to their disgust, for the cinematic conventions of their films and praised Second Life for its "sensation of space," which in his opinion should be utilized and represented artfully: "It is a medium about space… about mutability and change." When asked for his opinions on a hypermedial machinima that permitted viewer interaction, he praised the virtual world itself in a statement reminiscent of Jones's distinction between the immersive "I" of the virtual camera and the controlled "eye" of the physical camera: "Well, this does seem to be, does it not, a description of how Second Life actually operates?"[7] Perhaps theater of the future will be a full-sized interactive virtual world that everyone can enter and where anyone can build with a wave of the hand. Until then, we have to make do with the fact that, like cinema, machinima forces a three-dimensional experience into a two-dimensional one. Greenaway's inarticulateness points, rather, to the liminal status that the machinima occupies—something that is not quite in or out of the cinema "frame."

His choice for the "Greenaway Award" of Bryn Oh's *Rusted Gears* (2011),[H] submitted to the May 2011 MachinimUWA III challenge, speaks more distinctly than his generalizations. It is elegant, simple, short (only 2:13 minutes), nearly black and white, and framed by feathered edges. Neither

completely static nor completely moving, it pays equal homage to the painting and the silent film, and challenges the conventions of machinima as a miniature motion picture. Bryn Oh's otherworldly avatar stands silhouetted against a lonely road while the environment shifts beyond her from one windlight to another, and from "wireframe" and back. Accompanied by the minimalist tones of Sigur Rós, it tells a story of sorrow and loss using poetic subtitles. The environment is deliberately sketched and impressionistic, and an outsider might hardly identify its source as Second Life, if that is a viable definition of an art machinima—one that modifies the look of a platform. Another example of Greenaway's tastes is the series of machinima works directed by Saskia Boddeke (for which he wrote the text), in collaboration with composers, digital designers, and other Second Life artists in honor of "The Big Bang" project—the inauguration of the Copernicus Science Centre in Warsaw.[8] *Why Is There Something?* (2011)[l] uses digitally designed stills, live footage of animals and actors, and the "Susa Bubble" character in Second Life created by Boddeke (aka "Rose Borchovski") to tell the story of creation from the standpoint of classical mythology and biblical Genesis. "Do we want to make our avatars look and behave like people?" Greenaway (2011) asks. Susa Bubble—a bald, genderless child who has mysteriously multiplied herself—is a well-known figure in Second Life and a prominent photographic subject. The first film in the series unfolds in double screens and starts with a haunting recitation of the enumerated elements that one anxious Susa recites breathlessly. "Why," she cries with her doubles, "Is there something? Why is there not nothing?" Only viewers familiar with the artwork of Bryn Oh, Soror Nishi, and Rose Borchovski will recognize the Second Life background.

We cannot all be Boddeke or Greenaway. Most Second Life machinima films are individual and autonomous, lacking the connections and crew that permit them to be shown on august occasions. Greenaway's criticism was unpopular, and especially disliked by those who storyboarded a narrative and worked with a team. Nonetheless, here we have an experimental filmmaker and artist taking Second Life itself and its machinima seriously and exposing them to a wider audience. Whether one agrees with his extreme views or not, they pose important questions about our expectations of machinima made in Second Life: whether it might extend cinematic tradition as we know it or produce a generic and technical departure from it; whether such machinima could "stamp their image on the world" or remain closeted within the Second Life social scene along with its art. It is hard, however, to separate these possibilities so neatly. The social scene in participatory, networked culture is valuable and visible. One is in peril of pushing a definition of the "art machinima" into a category that not only excludes narrative and other machinima traditions but also becomes hegemonic and elitist. There are

plenty of Second Life films that are brilliant narratives, political satires, comic parodies of the art scene, documentaries, and imaginative music videos. By "Second Life art machinima," then, I mean that which takes for its inspiration Second Life art objects and uses them for independent aesthetic expression, foregrounding style and experimentation. They have the popularity, though, that the poem has, which is basically minimal in the eyes of the world on which they should be stamped. I turn, now, to a particularly rarefied art genre, hidden away from public view in what Bryn Oh (2011) calls "the feared 'Walled Garden'" (np).[J]

The work of art in the Second Life machinima

Comparatively little academic attention outside the virtual world and its blogs has been given to those in Second Life who are establishing a genre of inworld artwork that is neither a game nor an animation, and which is celebrated by a social event one attends with other avatars.[9] The *Journal of Virtual Worlds Research* published a short essay by John Lester ("Pathfinder Linden" in Second Life) which addresses the art scene back in 2008, especially a series of performances by the San Francisco "hyperformalist" artist and New Media guru DC Spensley (aka "DanCoyote Antonelli"). Spensley collaborated with the ZeroG Skydancers to produce a virtual aerial acrobatics which utilized the Linden scripting language to create "environments that change dramatically based on the actions of both the live performers and the audience" (Lester 2009, 4). These creations enclosed in virtuality are novel not because their like has never been seen before—3D computer-aided design has been around for decades—but because they can be experienced on a massively multiple scale in the virtual presence of people from around the world. These works of art may have remained largely invisible to all but the Second Life avatar were it not for machinima, which can capture a sense of its spaciousness and rotundity, but at the expense of immediacy and immersion. Any examination of Second Life machinima simply must acknowledge this important level: the self-consciously stylized three-dimensional environments and works of art that are built first and foremost to be experienced by the avatar. Indeed, machinima can monumentalize and publicize this creativity so closed to most of the public, but it also bereaves it of interactivity and imposes a monolithic gaze. In the remainder of this chapter, I will discuss the direction some Second Life machinima are taking with respect to montage, surreal environments, digital abstraction, mixed media, startling effect, and shifting frame size in their attempts not only to document the Second Life surreal landscape but also to use it as a frame for their own messages.

It is arguably Lainy Voom's *Push* (2009)[K] that put Second Life machinima on a new track in experimental filmmaking, and it is one of the few Second Life films to be featured on Machinima.com. Set to "Opaque Drum Solo" by Solace, *Push*, as one commenter wrote on Voom's YouTube page for the film, "is straight from a bio-mechanical nightmare": a montage of scripted devices—clocks, gears, spinning dials—accompanied by slightly frightening figures that move, like automata, in time with a percussive soundtrack. Money went into its making: "What would happen," Voom writes in her description, "if I gave myself 1 week to film, $50 and made the very first thing that popped into my head?" Not only does her film draw attention to artisans of the strange in Second Life from whom she got her props, but it also employs the (then) newish technologies of windlight and shadows added to the Second Life viewer in 2008/2009. A year later, Pia Klaar created an indirect homage to it in her machinima *SurreaL* (2010),[L] again set to a drumbeat and featuring similar editing effects with mirrored images and masked creatures going through stylized animations, this time with an emphasis on music and artwork instead of gears and clocks. With its blue skies and horse-headed, violin-playing avatars drifting down, it resembles a Magritte painting in motion. Images of easel and frame are a repeated theme, moving across AM Radio's moody art environment "The Far Away," and referencing her film as a frame that encloses and stylizes.

What this genre of Second Life art machinima does well is show-case the melancholy android and the wistful doll, the postmodern preoccupation with the mechanical body and the *corps morcelé*. There are also plenty of environments that celebrate the macabre, such as those by Claudia222 Jewell, Haveit Neox, and Cherry Manga. They have a distinct look to them—mechanical, detailed, exuberantly technical or grotesque, full of rusted gears, steampunk, the post-human, disconnection, and sadness. A group of Second Life artists identified this "look" and formed "the Cybernetic Art Research Project" (CARP).[10] The films based on it are usually set to evocative music with minimal storytelling, deriving their inspiration from these objects and environments and expressing a heightened awareness that Second Life itself is messing with body and mind even while it frees both. The "work-around" for these artists and filmmakers is an eschewal of realism, the pursuit of a strange beauty in estrangement and dismemberment. The final work by Igor Ballyhoo called *Metamorphoses*[M] exulted in the dangerous marriage of organism and machine: disembodied legs march mechanically, swinging axes between their thighs; masked skeletal figures in treadmills clutch their brains while giant scissors snap around overhead. Bryn Oh's work is less violent: a painter in real life, she developed her imaginative sim *Immersiva*. She is admired for her stylized, slightly McKeanish hybrid creatures and

robots, an early one being "The Rabbicorn Story," whose sad story is revealed through clues she placed around her sim. She has turned it into a short novel purchasable on Blurb[N] along with *Anna's Many Murders*,[O] which has much of the dark humor of Edward Gorey's illustrations. "I generally create melancholy narratives that are composed within a certain range of the colour palette in order to create harmony," she told me.[11] She researched Second Life thoroughly as a place for creative expression, drawing and making models for her digital sculptures. She approached the space she was given the way a painter approaches a canvas, selecting "[t]riads, tetrads or hexads on the colour wheel" and adding "contrasting colours to draw the viewer to the focal point of the narrative scene." Dissatisfied with the flatness and lack of engagement found in two-dimensional art and film, she turns her environments into interactive illustrations for her narratives: you must follow the signs, read the scraps of paper, find the hidden rooms.

We have seen this art from the turn of the 20th century and on, from the surrealist and expressionist movements to avant-garde cinema, animation, illustrations for graphic novels, and digital paintings displayed and sold on the internet. (For a good example of contemporary neo-surrealism in digital art, see the sites for "Surrealism and Visionary Art"[P] and the newer "Macabre and Beautifully Grotesque," a group on Facebook.[Q]) These Second Life builds are weirdly more real (surreal?) than its mainland neighborhoods because of their level of detail and terraforming. Many Second Life artists take pride in the fact that they can build environments in a virtual world that cannot be experienced in reality; they do not hang on physical walls, nor can they be taken in at a glance. Compare some neo-surrealist art[R] with that of Marcus Inkpen's tower in his "Utopia: No Sound";[S] there is something of Henry Selick's *Coraline* in Oh's "The Rabbicorn Story." Cristina Garcia-Lasuén (2011) lists Tom Jantol's animated shorts as a precursor for many of these builds and the films made of them (see the latter's *Cirque de Machinima—Cuckoo Clock* (2007) made in MotionBuilder)[T]. I see something of the Quay Brothers (*Street of Crocodiles*, 1987) in some of these distorted bodies; Cherry Manga and Anley Piers's build of *The Black Swamp* in Second Life[U] reminds me a little of Dave McKean's 2005 film, *Mirror Mask*.[V] Capcat Ragu and Meilo Minotaur's sim, *Delicatessen Petrified Floating Islands,*[W] shows figures with dog heads, a man clasped in an erotic embrace with the roots of a tree and, except for the baby faces carved in them, floating islands that resemble those in James Cameron's *Avatar* (2009), which in turn borrow from illustrator Roger Dean.[X] Scottius Polke's builds are decidedly more light-hearted in their comic resemblance to children's book illustrations, but with suggestively dark themes, especially his ghostly sim *The Docks* (exhibited Spring 2011 at Amase Lavasseur's *Originalia* sim)[Y]—but what distinguishes them artistically is community. These

artworks require mediation through a social environment, unlike *iClone* (2007) or *Moviestorm* (2008). In essence, many artists are devoted to highlighting rather than disguising the eeriness and transience of a virtual world in which we are subject to scripting errors that can deform us and a fickle industry that can erase us.

The most prominent public exposure of Second Life artistry took place at the 2010 World Expo in Shanghai which show-cased five regions built on the themes of deprivation and fragility. It also perfectly demonstrated the symbiosis of Second Life environment and film, which oddly competed for dominance. It was a project conceived by García-Lasuén—"Aino Baar" in Second Life—a curator and art critic in Spain who founded "Open This End,"[Z] "a cultural organization that researches, develops, and exhibits works of art generated through new technologies" (García-Lasuén 2011). Large screens were mounted at the Madrid Pavilion for this purpose and Bryn Oh approached Linden Lab for a grant to make virtual environments for filmmakers. Over the spring and summer of 2010, five "Utopias" were created, filmed, and shown at Shanghai, best seen now in Pia Klaar's machinimatic record of them, *World Expo 2010: The Whisper Tree* (2010).[AA] They comprise: "No Love" by Oh, featuring nightmarish insects, objects that burst apart when you walked over them, steps that appeared under your feet and directed your path; "No Light," again by Oh, which was built in shades of gray, with a glimmer of violet in the Aurora Borealis; Marcus Inkpen's "No Sound," featuring a broken causeway that led on either side into an immense tower of stacked wooden structures glittering with windows. In the distance, a mansion of empty rooms hung unsupported in the sky; "No Color," by Oh and Soror Nishi, dominated by the beige, spectacular skeleton of an angel, bones outstretched; and finally "No Energy" by Glyph Graves, alive with color, but languid: jellyfish floating just under the water; on the land, semi-transparent tendrils lift and fall, pulled by the weak energy of a slowly opening and closing anemone overhead. All these works have since been dismantled; Second Life is an expensive, evanescent world with regions and artwork that vanish when funds run out, and it is only the films that give us a glimpse of what is gone.[12] The question logically follows: Were these builds stage sets *for* machinima or were they works of art show-cased *by* machinima? What, essentially, was being shown at the Madrid Pavilion—Second Life machinimatography or Second Life artistry, or both? Clearly there is a symbiosis in this exhibit which continues in the challenges issued to machinimatographers by Second Life gallery owners. It is not so easily argued that the machinima documents or even frames the art that is created there. We have entered a moment in Second Life when the virtual art made in it depends as much on the machinima as the machinima depends on it.

García-Lasuén notes that much Second Life three-dimensional art represents "a futuristic aesthetics that take up a feeling of disenchantment for lost utopia from science fiction," where "virtually embodied space is bleak, almost monochromatic and disturbing" (2011). Yet each filmmaker (and inworld visitor) has the capacity to change that mood and even the color of the environment through the use of windlight settings. The choice of music, the composition of each clip, the pace, the use of tracking shots, orbiting, zooming, stills, cuts, or dissolves affect the representation. Klaar's *The Whisper Tree,* mentioned above, is exultant, set to an electronic rendition of Johann Pachelbel's "Canon in D," celebrating, it seems, the beauty and ingenuity of these creations. Her cuts from one scene to the next are punctuated by the rhythmic and triumphant emphases of the music. By contrast, Tutsy Navarathna's interpretation of the regions is darkly romantic; he made short machinimas of three installations, finishing each with a quotation from a poet or philosopher, and used overlays and slow dissolves.[BB, CC, DD] Her machinima is presentational while his is contemplative; she follows the progress of an avatar through the sims like an explorer whereas he poses his own avatar(s) as a sufferer in each film. We look at the back of her striding avatar from a distance (mimicking the look of our own avatar as we follow it); he presents a startling close-up of his avatar's face in *No Sound* as it turns away from the window and the ghostly mansion framed in it. In an art machinima contest sponsored by the University of Texas, San Antonio (September 2011), which required contestants to show-case Igor Ballyhoo's *Metamorphoses* and the "Snow Crash" exhibit, *Metamorphoses* was painted as ethereal by Spiral Silverstar,[EE] and sad and erotic by Sabbian Paine.[FF] As such, Second Life and the films made in it reveal a strong ambivalence about one's status as inside or outside a frame. It is part of the nature of the virtual to merge reality and representation, and anyone can *literally* see you, no matter what you build or how you dress, in a different light. They can even excise you visually and aurally.

This is an art-form of the moment. In "Arrested Development: Why Machinima Can't (or Shouldn't) Grow Up" (an apt counter to Kirschner's essay 2011a), Katie Salen (2011) quotes Adrienne Russell *et al.* on the "prevailing wisdom" that amateur music on the internet is "something to get beyond," a phrase Salen similarly applies to the machinima scene (39). Yet Salen also underscores machinima's "promise of participation": "'Getting beyond'"—that is, moving machinima out of the closet and into the mainstream—"might no longer be the goal," she writes (39). "Machinima may be showing us that a media form can remain immature and still be meaningful both to its participants and to the culture at large" (39). However, I am a little wary of this word "immature." I prefer her terms "resistant," "amateur," and "democratic" (47–8), and regret that she and

others address only the gaming frame and not the developing art scene where "democracy" is capitulating to competition.

I am unsure in which direction Second Life art machinima is going, whether forward or "sideways" (Salen 2011, 47). Something that has come to "maturity" has stopped growing, which is Greenaway's criticism of contemporary cinema. By "immaturity," Salen cannot mean "unskilled," since we have seen filmmakers and artists make rigorous demands of their art, nor am I sure what she means by the vague word "meaningful." One only has three to six minutes to convey an effective message through expertly placed clips; it is generally assumed that machinima should be short, especially if it is conceptual or montage. Those who work with this medium hope that Second Life technology will evolve (mature?) to produce more visually effective animations and surroundings, and in "Machinima is Growing Up," Fosk (2011) is optimistic about social virtual worlds. If maturity means "professionalism," in the sense of earning money and making careers, one must remember that the internet is becoming a level playing field for artists (Flickr) and writers (Blogspot) to display their work for the sake of displaying it. One may have to re-define "consumer."

Finally, if machinima in its maturity means getting noticed by the cognoscenti, then it is already dead, since, as Jean Baudrillard wrote, when a thing is named and "concepts and representations take hold of it," that's when it "loses energy" (2009, 12); it is moribund, subject to anachronism. By the time this collection is published, Second Life machinima will have progressed in step with its changing platform: new genres favored, new art, new contests, new exhibits and technologies. "Server Side Baking" will significantly affect Second Life viewers. I am already outdated. Peter Greenaway could give no examples to the person who asked for them at the 48 Hour Machinima Contest because what he was projecting was inchoate. There is always some frame that needs to be shattered, some dangerous crossing that will take us into new and provocative simulations.

Notes

1 MAG was started in 2009 by Lowe Runo, and is moderated at the time of writing by Cisko Vandeverre, Yani Jowicz, Larkworthy Antfarm, Celestial Elf, Asil Ares, and Natascha Randt. It gives information about techniques, resources, competitions and constructive criticism of the films uploaded there. I am indebted to these people for their kind help. http://slmachinimaarts.ning.com/

2 The new sim must "recognize" your avatar and adapt to it. If there is too much latency ("lag"), your avatar sinks through the ground or flies off into space.

3 Given at the 48 Hour Machinima Challenge Awards Ceremony in Second Life on September 23, 2010 (http://vimeo.com/15253336) and at the Imagine and MachinUWA Awards Ceremony in Second Life on May 22, 2011 (no video). For a short survey of Greenaway's interest in digital art-forms, see Drew Turney (2011), "Peter Greenaway's Second Life."

4 His machinima, *The Journey* (2004) (http://vimeo.com/1110082), which won the "Make Something Unreal" Challenge sponsored by *Epic Games*, took *Unreal Tournament* (Atari, 2004) and turned it into something that looks nothing like it.

5 See especially Jeffrey Bardzell (2011).

6 Spiral Silverstar's *Futurism Vs Art of the Future* (2011) (http://www.youtube.com/watch?v=UZE2TQrBr3w) juxtaposes stills of cubist/futurist paintings and moving shots of Second Life sculpture for UWA's fourth machinima contest, notably by narrowing and expanding the aspect ratio around the paintings as if to emphasize the traditional frame.

7 Greenaway is referring indirectly, it seems, to his film experiments that dispense with theatrical frames altogether, such as the recent one at Kasteel Amerongen in the Netherlands where he peoples the historical manor with projected images of actors playing the aristocratic family and its servants, and turns the mansion into a monumental frame (trailer at http://www.youtube.com/watch?v=HLDWtrtJmWE).

8 For information about that project and a list of credits, see http://www.wielkiwybuch.eu/eng/teoria.htm.

9 See Rowan Derryth's blog (2010–present) on the art of Second Life and also her column "Ekphrasis" in the online journal *Prim Perfect* (2010–present). See also Cristina García-Lasuén's article about the development of the avant-garde movement in Second Life art and its films, especially those shown at the World Expo 2010 Shanghai: "Video Art Now: Real, Virtual, and Machinima" (2010). During the late stages of this article, Phylis Johnson and Donald Pettit's *Machinima: The Art and Practice of Virtual Filmmaking* (2012) emerged, which focuses on Second Life: Due to space constraints, I am unable to reference other new studies emerging and emerged.

10 The *CARP* e-zine, edited by Diabolus, was first published in July 2009 and features art that can only be created and experienced in virtual realities, specifically Second Life. http://issuu.com/diabolus/docs/carp_creators_velazquez_bonetto_1

11 Private e-mail used with permission.

12 See also Lowood (2011, 3), who writes of machinima "not only as a vehicle for commentary on virtual worlds and the communities of players that inhabit them but also as a source of historical documentation about those worlds and communities as they disappear and fade into memory."

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PART TWO

Using machinima

http://m.understandingmachinima.com/chapter7/

7

The art of games

Machinima and the limits of art games

Larissa Hjorth

As a genre drawing on games, new media, and art references and techniques, machinima has not only become a rich source for commentary upon these areas, but also a melting-pot for rethinking the convergence and boundaries between the disciplines. With its non-interactive and analog soundscapes, machinima suggests that "new media" cinema in the twenty-first century—like the twentieth-century—is haunted by old media (Manovich 2003; Chun 2005). Although some choose to explore machinima's relationship to film, this chapter is concerned with its relationships to art, new media, and games—an association that can expose as much about these disciplines' limits as their potentialities.

Through the lens of machinima, we can begin to reconceptualize these intersections that are often blurred, remixed, and remediated. While much

machinima, such as Rooster Teeth's *Red vs Blue* series (2003–present), are very much made for and part of gaming cultures, examples of machinima may also increasingly be found in realms "outside" of games, such as the visual arts. But does this movement of machinima between the disciplines represent a convergence between art, games, and new media? Or does it actually highlight attempts at disciplinary boundary-making?

To explore this issue and the limits of machimina in relation to art and games, this chapter examines in particular the work of one artist who has done much to popularize machinima—Cory Arcangel. United States-based Arcangel is indicative of a new breed of artist who is bringing machinima and art games into the mainstream.[1] Reviewed by *The New Yorker* (Scott 2011) in the wake of a solo museum exhibition at the Museum of Contemporary Art (MOCA) (North Miami), called *The Sharper Image*, and another at the Whitney Museum of American Art, called *Pro Tools* (both in 2011), Arcangel has taken game-art convergence to new audiences, especially through his machinima works. In this chapter I want to use the work of Arcangel to outline the terrain of machinima through its relationship to art games and its reappropriation by the visual arts. By "art games," or "arthouse games," I am not referring to "art" within games but, rather, to a wider notion that plays into the tradition of avant-garde movements by seeking to challenge audiences' expectations (Flanagan 2009; Pearce 2010). After first outlining art games and their relationship to machinima, I turn to examine the work of Arcangel as arguably one of *the* representative artists of gaming and new media cultures. But behind the media hype, what does Arcangel's machinima proffer and contribute to the study of machinima? Does Arcangel's recent exhibition, *Pro Tools,* further the intersection between art games, new media, and machinima?

Art games: collisions between new media, games, and contemporary art

Much has been made of the growing pervasiveness of games as a vehicle for global popular culture. From iPhone game apps and haptic Wii consoles to the burgeoning of social media games made by companies like Zynga, games have arguably become one of the most dominant twenty-first-century media forms. Whether this phenomenon is called a "ludification" (Raessens 2006) of social ties or a "casual revolution" (Juul 2009), the fact that games have become an all-encompassing form of social media culture is undeniable. In this transformation, we see that games provide a lens into understanding

practices of the vernacular and local in the face of global forces (Dovey and Kennedy 2007; Egenfeldt-Nielsen *et al.* 2008). Characterized by three key features—mobile, social, and casual—games have arguably become the symbol with which to analyze, reflect, and intervene in social, cultural, and political issues (Kerr 2006). Given the pervasiveness of games as both cultural practice and artifact, they have also become tools of experimentation for new media groups such as the UK's igloo (e.g. *Swan Quake*) and US artists such as Arcangel and Brody Condon. As a culture formed and informed by hacking (Haddon 1999), games and ancillary genres like esports are exemplary of the rise in "vernacular creativity" (Burgess 2008) and user-created content (UCC). This is particularly so with machinima, in which games are rendered tools for and of expression (Arvers 2010).

Games are also connected to art in increasingly intricate ways. Art games draw heavily from the political subversions of avant-garde strategies, especially urban mobile games (Lantz 2006).[A] They take two forms—interactive and non-interactive. Some genres draw their techniques from new media art; others deploy more conventional visual art strategies from disciplines such as sculpture, painting, and video art.

According to Celia Pearce, art games may be viewed as "a collision between the worlds of art and video games" (2010). At the 2010 *Art History of Games* conference in Atlanta, Pearce noted that art games drew from process-based avant-garde movements like Fluxus (i.e. Nam June Paik) and evoked the spirit of artists like Marcel Duchamp, father of the readymade.[B] In her examples, Pearce discussed hybrid mixed reality projects such as Frank Lantz's *PacManhattan*, whereby the game of *PacMan* (1980) was placed onto the grid of Manhattan. Here the limits of the game blur across online and offline spaces through the sandbox performance of the game. Rather than being goal-driven, the game brings notions of the social and the political to the forefront.

As a genre once evolving from gaming cultures, machinima has grown to become its own "art-form." Fusing art, cinema, new media, and games, machinima's genealogy echoes that of other misunderstood genres like net.art (Arvers 2010). According to French games critic Isabelle Arvers (2010, 236),

> Machinima can be seen as following in the footsteps of Dadaism and Surrealism, which saw play and entertainment as the most subversive and also as the ultimate forms of art. Even outside of an art context, it is important to remember that as soon as the first personal computer was created, MIT computer scientists hacked the computer code to conceive the first digital creation: *Spacewar!* And *Spacewar!* was a computer game. So, if computer game history is related to the roots of digital creation

> and to digital code hacking, machinima can be understood to follow this tradition.

Not only does machinima highlight the fact of games history as an evolution driven by hacking (Haddon 1999; Arvers 2010), it also illustrates its role as part of a critical play genealogy that has its origins in avant-garde movements. According to Arvers (2010) and US-based game designer and historian Mary Flanagan (2009), machinima may be paralleled with critical play techniques evoked by avant-garde movements such as the Situationist International (SI). Machinima demonstrates that play can be a way to explore and innovate, signposting much of the play literature that has discussed it as a form of social and cultural practice (Sutton-Smith 1997). For Flanagan (2009), cartographies of twentieth-century avant-garde media practice may be mapped through the notion of "critical play." In *Critical Play*, Flanagan highlights the important role artists/activists have played in shaping game culture. Through alternative games, Flanagan provides new ways of thinking about game design and play, specifically from an avant-garde context. Drawing on an art history canon, *Critical Play* "outlines how play has influenced the history of creative exploration of the social and the political" (Flanagan 2009, 2).

Contrary to Lev Manovich's claim that games need to be contextualized in terms of computer science (2003, 48), Flanagan argues that we need to understand games' "creative and aesthetic origins rather than a primarily technological context" (2009, 2) through correlations between games and art. Flanagan's focus upon "artists using games as a *medium of expression*" (2009, 3; emphasis in original) has been central in "activist approaches to media" that highlight "media's inherent imbalances" (2009, 13). From Surrealism and Dadaism to Fluxus, games have played a pivotal role in artistic and political expression. As Flanagan observes:

> In the early part of the twentieth century, World War I, scientific developments, and the increasing influences of the writings of Sigmund Freud brought new interest in the unconscious and new experiments with play.… Artists have used games as a medium of exploration and expression for over one hundred years. Like art, games tend to reinforce larger cultural influences. Artists, especially those who followed the Surrealist and Fluxus movements, also tend to be especially critical of the ways games are tied to social structures, economies, and ideas of their times.
>
> FLANAGAN 2009, 88

Much of game art tends to question a key premise of games—interaction. This questioning can also take the form of non-interaction such as machinima.

The work of Arcangel[C] is exemplary of deploying both the interactive and non-interactive elements in his installations to consider the relationship between game art, new media, and contemporary art. Examples of Arcangel's game art include the hacked (non-interactive) console mods of *Mario Brothers* (1983) called *Super Mario Clouds* (2002),[D] along with an interactive modding of *Hogan's Alley* (1984) in which the aim of the game becomes to shoot Andy Warhol, called *I Shot Andy Warhol* (2002).[E] Within the realm of interactive art games, we can find various forms of machinima that traverse between the analog and the digital, between online and offline worlds.

The art of machinima: migrations from analog to digital, online and offline, political and beyond

Machinima is just a medium, neutral as any other medium. Yet, as any other "remix" practice, it has an enormous potential that emerges when the existing material is used to convey a meaning that conflicts with its own source. The video becomes a kind of prosthetic narrative, which extends the game's narrative in an unpredictable direction. And that, sometimes, rejects the body it was designed for. From cut-up theory to culture jamming to Nicholas Bourriaud's "postproduction" model, many great theorists have discussed this potential: what is interesting to me is that, when it comes to games, your appropriation is not only dealing with "existing cultural material", or with a medium, but with your own life, the life you lived inside the game.

QUARANTA 2009, NP[F]

The word machinima *mixes the idea of cinema, machine, and animation. It is the encounter between a film and a game, in which gamers become film directors. As a technique to produce films, machinima is a new cinematographic genre.*

ARVERS 2010, 260

Machinima expands and rehearses twentieth-century media practices at the same time as it provides a space in which to reflect upon contemporary interactive media. By infusing digital visual cultures with analog voice-overs, machinima is a perfect blend of digital and analog (Arvers 2010). Echoing the marriage of old and new, of analogue and digital so pivotal to intersections between new media and game art, machinima epitomizes the specters of the old in new media. As Lev Manovich (2003) observes, contemporary new media

and digital practice are all consumed by fetishizing the real through the lens of the reel—that is, the texture and skin of the analog. He identifies the haunting of the analog through a variety of software—such as *Adobe Photoshop* (1990) and *Pro Tools* (1991)—that all operate to maintain the presence and aura of the analog through the digital process. This is furthered by the rise of UCC from mobile phone apps like the Hipstamatic for the iPhone, which not only appears on one's screen like an analog camera but also takes pictures that have a filmic, analog look to them (think 1970s film stills), thus borrowing from the aesthetics, texture, and memory of the analog while exploiting the digital quality to afford easy uploading and sharing through social media. While this haunting is omnipresent to the discourse of new media and its "what is so new?" genealogy (Chun 2005; Gitelman 2006), its specters underlying art games are emphasized in the case of machinima. As Arvers identifies, "voices are the human side of machinima", (2010, 230), bringing an "'as if' analogue feeling to the machinima—a counterpoint to the digital" (2010, 231). Arvers further notes that the voice in machinima may be seen as a technique of the Situationist, most notably the *détournement*. She writes:

> By using virtual spaces and changing the perspective as an artistic strategy, machinima allow a distanced critique of a simulated world.... They reactualize the Situationist conception of cinema, in which images, voices in dialogs or interviews or voice over, act as different layers of content.
>
> 2010, 231

Drawing from Joseph Beuys's discussion in 1977 of the voice as the sculpture of thought, Arvers continues that voice is

> the information sculpted by the air through the organs. It transforms the immateriality of thinking into materiality by bringing the body inside the sound.... Voice reflects the idea of alterity and the relationship to another person. Voice is the simultaneous presence and absence of human corporeality. Voice is the content and the meaning in language but also the sound of a persona and their body through time and space.
>
> 2010, 234

The role of sound to overlay the analog onto the digital in machinima highlights this remediation as part of broader new media practices (Gitelman 2006). Voice is an important part of machinima and its extension of the analog. Sometimes this extension of the analog can operate through the *negation* of voice by way of subtitling, reminding us of early twentieth-century media such as silent films. For Alex Chan's *The French Democracy* (2005),

the choice of no voice-over, along with the English title, was important in its distribution to a broader audience. Deploying the game engine of *The Movies* (2005) to make one of the first political forms of machinima (Arvers 2010), Chan directed, subtitled, and uploaded his work in a week in response to the 2005 Paris riots. With over one million downloads, Chan's choice to subtitle in English was important to the message having global appeal and currency. Moreover, it signaled that machinima had come of age—it had become a tool for political expression, illustrating that games can become vehicles for expression not just symbolically but also literally.

Machinima not only provides a medium to explore the transitions between the analog and the digital through playing with voice and image combinations; they also provide a critical space to consider politics, often implicitly rather than explicitly. The deployment of intertextual references across different genres and media can be a way for machinima to reflect upon games. One key example of early machinima made for and by gamers is the *Red vs Blue* series (2003–present) adapted from the *Halo* (2001) game engine. Its creators deconstruct the genre of FPS (first-person shooter) games by deploying postmodern techniques such as irony, intertextuality, pastiche, and parody. Rather than performing the typical FPS features of *Halo*, *Red vs Blue* consists of some characters trying to be sensitive, reflexive, almost new-age types—the antithesis to the avatars in *Halo's* typical shoot-'em-up roles. This intertextual deconstruction of FPS is most prevalent in the 2006 series of *Red vs Blue*,[G] in which the characters not only unpack stereotypes around violence and videogames but also use it as a platform for exposing fictions around identity politics in the US. In playing up this antithesis, *Red vs Blue* utilizes, again, the classic machinima tension between analog and digital with the human voice and humorous dialogue evoking the "analog" that works against "cold digital spaces" (Arvers 2010). In this way, machinima proffers a space to critique and challenge notions such as violence in games.

Within gaming cultures, modding has also provided a space for play, critique, and reflection. Given this phenomenon, it is no accident that early examples of modding as political in-game intervention often took a political angle. In-game interventions involve, as the title suggests, interference in online game spaces in order to upset game norms. One key example of this online intervention genre is *Velvet-Strike* (2002) by Anne-Marie Schleiner, Brody Condon, and Joan Leandre (an intervention within the game *Counter-Strike* (2003).[H] Another example is Eddo Stern's *RUNNERS: EverQuest* (1999–2000), an online intervention where three players run around endlessly in the world of *EverQuest* (1999). Stern's political commentary is strongly voiced in his real-time performances, including *Tekken Torture Tournament* (2001)[I] which "immerses" the players by giving them electronic shocks every time onscreen damage occurs.

In his collaborative work with C-Level (particularly with Peter Brinson, Condon, Michael Wilson, Mark Allen, and Jessica Hutchins),[J] Stern commented on the 1993 Waco massacre in his work *Waco Resurrection* (2004),[K] by rendering the tragedy into a game. In this game space, every player becomes David Koresh (the cult leader), sitting in his shoes. With the aim of the game being to die and become a martyr like Koresh, *Waco Resurrection* players are forced to experience the inescapable tragedy.

With his background serving in the Israeli army giving him firsthand experience of violence and bloodshed, Stern's works are highly critical of the relationship between media depictions (in game spaces and in the general media) and the real world itself. This is highlighted in Stern's first machinima in 1999, *Sheik Attack*[L]—a palpable depiction of Israel's bloody history. Like *Waco Resurrection*, audiences are given few options to deviate from history and must experience the unavoidable tragedies and collateral damage. By deploying game engines, game art machinima elude a sense of interactivity by positioning viewers as quasi-players. This quasi-player agency creates a different sense of embodiment and affect from conventional film. Stern's work thus highlights the way in which his machinima films may, like Chan's *The French Democracy*, be used as a political tool to comment on media, such as games, as a lens for broader social issues. Rewriting the relationship between machinima and new media art, Stern's work illustrates how art games can provide some of the most explicit examples of political commentary. More than that, as Domenico Quaranta points out, Stern's work is best understood not by the portmanteau of "machinima," but rather as "machine animations." By emphasizing the mechanical nature of the animation process, Quaranta highlights the way in which Stern inverts the compulsion to hide the artificial elements, thus covering the mechanical behind the seamless scenes. Rather than allowing us to just watch a scene of violence, by exposing the methods Stern also highlights the realities behind the illusion. While much of twenty-first century cinema may have been about creating illusions, Stern's "machine animations" are about the inverse. As Quaranta (2009, np) observes:

> If videogames, through photorealism and immersion, employ considerable effort to make the player forget the machine, Stern returns the machine to the forefront. This could be unpleasant for both gamers and non-gamers, but it's the only way to escape the magic of so-called virtual worlds and start making works that are critical of self.

The need to expose the artifice behind the images we consume is also important to Beijing-based Cao Fei, another artist who marries politics with

games and art through machinima. As an artist who explores popular culture through a variety of methods, including video and machinima, Cao Fei's work transforms cultural stereotypes in her ongoing Second Life project, *RMB City* (2010).[M] Drawing on popular stereotypes from China such as panda bears, Cao Fei's avatar, China Tracy, explores the possibilities and limitations of the "virtual" on various levels by creating different formats of *RMB City* from machinima to "live theater" performances in Second Life. In the sci-fi scape of *RMB City*, the virtual and the offline are reflected upon through the project's various mutations. At the same time as deploying stereotypes, Cao Fei playfully blurs commodities as part of a global imaginary. In *RMB City*, we are met with utopian skyscrapers accompanied by sinking Mao statues—a collision of Chinese popular culture references. For Cao Fei, *RMB City* represents a laboratory for past, present, and future interdisciplinary collaborations across design, art, politics, and cinema. Cao Fei highlights that the tapestry of Second Life is much more than just corporate, educational, or experimental in flavor. By rendering her Second Life works into machinima, she uses its space to comment on the virtual space and its reflections upon the offline.

While Cao Fei uses popular culture and new media as a site for experimentation that have both real-time (in terms of Second Life performances) and machinima outcomes, other artists use a fusion between machinima and in-game intervention to experiment on more abstract levels. For instance, artists like Julian Oliver make generative and hardware mods with the real-time capacities of games to produce works that continuously evolve. Oliver's *ioq3aPaint* (2003–2010),[N] a generative painting system modded from the game *Quake III* (1999), is an excellent example of this genre. But of all the artists deploying machinima, Arcangel is the most well known outside of the world of gaming and art. This makes him perfect to discuss the reappropriation of game-art, specifically machinima, and its relationship to and between games and visual art.

Traversing game and art: a short case study of Arcangel's *Pro Tools* exhibition

Cory Arcangel is indicative of a contemporary milieu of visual artists exploiting the currency of games as a growing part of collective global memory and cultural practice. This makes him a perfect example of an artist deploying "game-art" and "art games" techniques like machinima, and branding them for the art world. Within the art world, one often finds a decontextualization of art-games' dimensions for art world consumption. Specifically, Arcangel's

work addresses the memories and sentiments of the growing demography of curators and buyers, now deemed to be Generation X, or the post-baby-boomer generation. This mnemonic capacity of game-art to unhinge the affective aspects of games is overtly co-opted by Arcangel. Curator Ruba Katrib, associate curator at MOCA (North Miami), notes in her catalog essay of his work that Arcangel is one of the first generations to grow up on videogames:

> Most people growing up in the United States in the 1980s distinctly remember the way these games looked, their soundtracks, and the hours spent fighting over whose turn it was to play—familiarities that Arcangel employs in his works.… However, Arcangel focuses more on the iconic quality of the games he uses in his work for both their novelty at the time of their creation and their dated graphics as time progresses, rather than on cutting-edge technological innovations.
>
> KATRIB 2011, 9

As Katrib observes with regard to Arcangel's earlier works such as *Super Mario Clouds* (2002), in which he hacked the game cartridge to remove everything apart from the blue sky and clouds, Arcangel has a "Fluxus tendency towards art-making, with roots in a John Cage lineage" (2011, 11). Having studied composition and electronic music at the Oberlin College Conservatory of Music, Arcangel's passion in everyday popular media and sound cultures as reflecting epochs is clear. In *Super Mario Clouds* as well as *Various Self Playing Bowling Games* (2011; discussed below), the avatar (i.e. Mario) is absent from the visual narrative, which is, in turn, accompanied by a soundtrack without voiceover (*i.e.* without the "analog" and human elements).

For Katrib, Arcangel's work references avant-garde practices which have often sought to problematize technology. Specifically, Arcangel's *Structural Film* (2007) draws heavily from Nam June Paik's *Zen for Film* (1962–4); other works are inspired by John Cage. But beyond the explicit attempts to locate his art within an avant-garde tradition of critical play, the "revolutionary" aspects of Arcangel's practice are questionable, especially when taken out of the rarified context of the visual arts and placed into the realm of machinima. My point in discussing his work is not to undermine its currency, as many of his works are funny and playful. Rather, it is to examine the way in which he is packaged in the context of the art world, devoid of art-game contextualization, and which I argue is deeply problematic.

From *Super Mario Clouds* to his *Self Playing* series (including *Self Playing Sony Play Station 1 Bowling* (2008) and *Various Self Playing Bowling Games*

(2011)), Arcangel transforms iconic game moments into the mundane signs that comment on the meditative, abstract, and prosaic elements of games. While some art curators like Katrib celebrate Arcangel for his exploration of technological "failure" and obsolescence, they do so without contextualizing him in terms of the growing body of machinima that traverse the political, the social, and the creative. For example, Chan's *The French Democracy*, as discussed above, is a great example of a political machinima commenting on contemporary malaise. Are Katrib's observations therefore indicative of the visual art world's myopia, claiming innovation and criticality, when, in actuality, the "critical play" (Flanagan 2009) elements of avantgarde art practice is more likely found these days in game subcultures like machinima?

I will focus now on Arcangel's *Pro Tools* exhibition, which I visited in 2011, to explore this question. In June 2011, Arcangel became one of the youngest artists (along with Bruce Nauman) to hold solo museum exhibitions in the United States (*The Sharper Image* at MOCA and *Pro Tools* at the Whitney). In *Pro Tools*, Arcangel examines the relationship between older and newer videogames, "fake" interaction, and remixed YouTube clips. The title evokes the aforementioned "haunting" of the analog in new media, where the software program, *Pro Tools*, emulates the texture of the analog. This relationship between analog and digital runs throughout *Pro Tools* as Arcangel takes "interactive" media like games and renders them noninteractive (i.e. machinima). For example, many of Arcangel's works, such as *Various Self Playing Bowling Games* and *Masters* (2011), both of which I will detail later, give the illusion of being interactive games when they are actually machinima. Here Arcangel toys with audiences' memories, expectations, and disappointments as they move from what they are led to believe is interactive, but actually isn't.

By re-contextualizing games and game art in museum spaces like the Whitney, Arcangel's work provides another inroad to reflect upon art and game convergences and divergences. However, Arcangel's work also almost self-consciously tries to emphasize the "art" rather than the game elements. In *Various Self Playing Bowling Games*, the audience is greeted by a large video projection (approximately 4 meters high by 15 meters long) depicting various types of bowling games from the 1970s to the present. What we see are not only the advances in technological and graphic abilities but also the ways in which the ways of playing have not changed all that much. In the process, the audience is also able to compare and contrast the different aesthetic playabilities while being provided with a short history in the types of bowling videogames. Nostalgia is overlaid with gradations of technological obsolescence as seen in, for example, a table of old and new consoles which sit inert while games are played. Here there is an inertia between the

games played and the missing player, as if to highlight the limits to interaction. Moreover, by deploying bowling games, Arcangel is referencing one of America's most scathing attacks on contemporary social capital by Robert Putnam in his book *Bowling Alone* (2000). For Putnam, the decline in social welfare and community awareness has led to a weakening of "social capital," a situation he depicts through the analogy of bowling alone. One doesn't have to be a bowler to know that the sport is a highly social one; to be bowling alone thus defeats one of the game's central premises.

Not only does one feel in watching *Self Playing* a degree of inertia with respect to the non-interactivity of the piece but also a sense of general failure, given that the player fails every time to score a strike. Looping perpetually, the failure is repeated until it becomes part of the pattern. Arcangel highlights the fact that much of gameplay time involves failure. Here one can reflect upon the rise of sandbox games and their lack of purpose in terms of conventional winning in goaldriven games. Rather than just "bowling alone," Arcangel's work makes us feel as if we are bowling in a sandbox (game) both literally and metaphorically. For Christiane Paul, curator of new media art at the Whitney Museum, Arcangel's videogame modifications "[undermine] the experience of play" (Paul 2011, 3): "viewers do not get to interact with the bowling games but instead watch the games seemingly play themselves" (2011, 3). Here the lack of interactivity, so central to the rendering of games into machinima, seems to place the work in a paradoxical place. Viewers in art galleries are long accustomed to not touching art. However, when the piece in question is a game or has game-like aesthetics or texture, audiences suddenly feel torn between their instinct to play and engage with a game and the actuality of being a lurker.

This situation of lurking, so pivotal to Arcangel's machinima and game modifications, highlights the anxieties around interaction and engagement in a period marked by "participatory" and "co-creative" (Banks and Humphreys 2008) media. With the internet becoming ubiquitous with the rise of media devices such as smartphones, one always feels compelled to interact. As Kate Crawford observes, so much of the discussion about new media participation denigrates activities like listening as "lurking" (2009). However, it should be noted that such judgment varies, depending on the cultural context. In China, for example, "lurking" is seen as a positive form of participation (Goggin and Hjorth 2009). These anxieties around the need to always participate and multitask have caused theorists to re-examine debates around co-presence and embodiment. In this sense, machinima as an example of twenty-first century cinema also clearly links to twentieth century media paradigms, where the participation of the audience does not take place as players but as interpreters, or reader-as-producer (Barthes 1967). It is important to acknowledge

that these paradigms existed before the so-called transformation of the digital age as forwarding the agency of users as "prod-users" (Bruns 2005).[O] In the case of Arcangel's work, in which so much of it performs "interactivity" (i.e. looking like a game to be played when it actually isn't), we witness an inversion of the Barthesian notion of the "death of the author." Given the emphasis of contemporary media upon interactivity and the rhetoric around user agency and co-creativity, Arcangel challenges audiences and their so-called co-creative agency with works that promise interaction but deliver anything but. In this way, Arcangel invokes much thought about our relationship with the text.

Arcangel's interest in game-art doesn't just involve game engine textures; it also involves the way in which games are packaged. Interlaced between videos that deploy machinima and YouTube techniques, one can find various "tributes" to games and older media such as cassette tapes. Here we see that the growing acceleration of technological obsolescence driving much of today's lifestyle cultures leaves in its wake a history of cultural artifacts (Wilson and Jacobs 2009).[P] We are reminded of Sherry Turkle's call for "intimate ethnographies" of objects as reflections upon their owner's identity, social and cultural capital (2008). We are also reminded of Igor Kopytoff's idea of material objects as having lives and biographies (1986, 66). Places and objects become a collection of stories that are rendered by people into narratives of self in order to make sense of the world. In the case of game art's continuous and accelerated need for updates, we are left with nostalgia. Sitting next to aesthetized obsolete objects (in the form of consoles) rendered "cool" by their very retro quality (think DJ culture and its deployment of vinyl to distinguish itself from mainstream DVD culture), we find yet another work, *Masters* (2011), this time incorporating a game resembling a game of Wii golf. In *Masters*, the audience are not only allowed to touch the game, they can also "participate." It is only after a few attempts at hitting that one realizes one isn't the player and that the game is continuing on its own path regardless. As Paul (2011, 6–7) describes:

> In Arcangel's *Masters* (2011) … viewers can play an interactive golf game in its regular setup by putting a golf ball but their actions will not lead to a corresponding result in the virtual world. No matter how players hit the ball, it will never end up in the hole. As in *Various Self Playing Bowling Games*, Arcangel humorously employs the failure of game play to highlight a subtle point about the technology of the game. In this case, Arcangel's intervention questions the relationship between the actions of a human body in sports and their extension into a virtual environment, playfully commenting on the nature of "simulating" a physical activity in the virtual

> world of a game. Golf itself is a simulation of a simulation, a highly stylized reproduction in which people engage in the imitation of a chase (after a ball) in an artificial landscape. For Arcangel, simulation is a key element of our world and our obsession with highly manufactured renditions of reality.

Masters may thus be viewed as an analogy for Arcangel's practice and what it contributes to art games. It takes interactivity as part of a fake performance—an infinite regress of simulation. *Masters* also fuses machinima with game genres, confusing and infusing the limits of where games end and machinima begins. What looks like an interactive golf game is actually machinima. The magic circle of the game becomes an audience watching other people as they attempt to interact, only to find that they can't. Here we see an example of machinima as live performance, in which the work is less about "watching" the screen but, rather, about engaging with the game in the physical space and seeing how that relates to the screen. In other words, the machinima is one component in an installation that seeks to fuse and confuse what is interactive and what isn't. *Masters* looks like a game, but is actually a machinima feigning interactivity through attendant props like a golf ball that audiences can hit. While audiences may at first think that the golf ball and screen have a relationship (as in a Wii game), in *Masters* the screen and installation have no connection—they are a simulation of interactivity. In an age of haptic and mobile gaming media, this moment of, and for, the contemplation of disembodiment is important, whether it takes place in an art gallery or otherwise. While Arcangel's work popularizes machinima for the art world and provides a commentary on the expectations of games and new media more generally, his work does not revolutionalize machinima. Rather, it highlights machinima's established track record of toying with analog and digital interdependencies and the fallacies around interactivity through borrowed avant-garde techniques. Although the art world may believe Arcangel's position to be prominent, within the context of machinima he is just another good artist among many.

Traversing game and art worlds, Arcangel's work highlights the types of boundary-making exercises taking place in an age of so-called convergence. Rather than merging the areas of art and games, we see how tactics in deploying the miminalist mantra—context as content—operates today. While games may be burgeoning across various platforms and realms that encompass its mobile, social, and serious features, "art" and "games" nonetheless still appear to have clear divisions. While the portmanteau of art games seems to suggest a hybrid space between the two, it actually highlights their divergences and differences. This has partly to do with art world contexts like museums providing a different space for commentary and

contemplation away from the multi-tasking worlds of online media. However, due to the all-pervasive rise of smartphones and the resulting inability to escape the "internet," the art world can no longer claim such rarefication. Specifically, the relationship between games and art inside and outside the art world occupies a curious position in need of analysis. Through the example of Arcangel as one of today's most celebrated artists deploying game-art techniques, we can see some of the distances and differences that are still in need of connecting. Machinima, as both screen media and part of broader art performances, thus provide new avenues for exploring art and game convergence.

The art of gaming: conclusions on machinima and art games

This chapter has provided a rudimentary outline of some of the ways in which art games and machinima can be considered inside and outside art world contexts. It has argued, in tune with Flanagan (2009), that there needs to be more of a discourse between art avant-garde history, games, and new media. As the games industry moves increasingly into the mainstream and thus becomes a more integral part of global popular culture, so, too, are we seeing a rise in indie and art games as well as their growing importance as an aesthetic and technique in the art world. I return to my initial provocation: is this just the myopia of the visual art world wanting to claim innovation and criticality when, in actuality, the "critical play" (Flanagan 2009) elements of avant-garde art practice are more likely to be found these days in game subcultures such as machinima? In that respect, I have discussed some examples of art games that oscillate around the area of machinima. This area, I argue, is growing and converging as it takes on new types of content and techniques. With artists like Chan making political machinima, the realm for the medium as a space for commentary, reflection, and contemplation of games as well as of games as a lens for socio-cultural practices dramatically expands. The art world, with all its references to avant-garde practice, can no longer safely occupy such an arena. Through works such as those by Arcangel, I have attempted to extrapolate some of the ways art games techniques in the art world can provide possibilities and limits for both art and games, enabling us to learn more about the limits of the art world than that of art games. Indeed, the growing world of machinima demonstrates that, as the art world shrinks, game-art expands.

Note

1 Other artists comprising this "new breed" include Beijing-based artist Cao Fei. These artists embody the playfulness of avant-garde artists like Marcel Duchamp. See Mary Flanagan (2009) for further elaboration on the role of play in historical and current avant-garde practices in art games.

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8

Playing politics

Machinima as live performance and document

Joseph DeLappe

Art is a state of encounter.

BOURRIAUD 2002, 18

dead-in-iraq

The cocking of an M16 rifle echoes from the alley walls. You look out on a narrow street of an unidentified Middle Eastern city of low, tan buildings dotted with TV antennas, satellite dishes, and the haphazard, criss-crossed electrical wires of a city under siege. The onscreen message reads: "Check your gear. The mission starts in 7 seconds." Turning to the right, you see

your fellow soldiers, similarly awaiting the commencement of the fight. As the countdown reaches zero, the background rumble of Humvees is interrupted by the forward surge of your comrades, one shooting off his weapon as if to announce the start of a race. You watch as the others go off into battle. Remaining still, you drop your weapon. Unarmed, you move forward, following just behind a group of soldiers heading to the right—one of them is hit, falling to the ground some 50 feet to your front. You stop, looking out onto an adjoining, narrow street. You begin to type. The text appears across the top left corner of your screen; upon hitting return, your message is broadcast: *"[US Army] dead-in-iraq radioed: RICARDO X RODRIGUEZ 23 ARMY OCT 4 2007"*.

A dispassionate, electronic voice calmly reads your words aloud, only to be interrupted by the appearance of an enemy combatant in a nearby doorway who sprays you with automatic weapons fire. Your vision flickers as you absorb direct hits, finally going dark. In the aftermath of your death, you now hover over your body as if you are a spirit, seeing yourself slowly falling sideways, finally resting immobile on your side. The screen reads: "dead-in-iraq was shot by Red…Eagle." For the remainder of the battle you remain here, floating over your corpse, typing. When the round ends, you are reincarnated and return to the narrow alley-way with your comrades, awaiting the start of another round of battle, and the process begins anew.

The scene described takes place in the first minute of a machinima document of an online, interventionist performance entitled *dead-in-iraq* (2006–11).[A] Equal parts protest, memorial, and performance art, *dead-in-iraq* was enacted within the Defense Department-funded recruiting and marketing computer game, *America's Army* (2003–present).[B] My actions within the game commenced in March 2006 to coincide with the third anniversary of the start of *Operation Iraqi Freedom.*

dead-in-iraq is, first and foremost, a quiet, private action aimed directly at fellow gamers within the context of the game. Conducted from the privacy of my home office, I log into the game as would any typical player of this internet-based arena for team-based first person shooter (FPS) action. This is a live, performative act. The immediate audience for the work, my fellow gamers, are confronted by a player who does not "play" the game, but sits at his keyboard carefully typing the name of each US military casualty into the "game." Within this online field of play, my presence as a real and virtual interloper is essential towards creating what I would like to refer to as a type of live, machinimatic act. The real-time intervention in the game space temporarily pierces "the magic circle" (Huizinga 1955, 10), passing through the fourth wall of FPS escapism by inserting the harsh reality and consequence of warfare into this facile simulation of war. The very efficacy of *dead-in-iraq*

relies upon the understanding of the work as a live event within a real-time, active game space. *dead-in-iraq* is an encounter of transgressive play—an interventionist action that is similar in manner to those as long practiced in the realm of protests, street theater, performance art, and, more recently, flash mobs.

The infiltration of the game as an act of protest and memorial works to reveal the hidden moral and political implications underlying this government-funded recruiting and marketing system. The recruiting platform becomes an arena for an entirely different level of conflict, interaction, and political communication, as clearly expressed through the reactions of other players: "dead STFU!," "This is a game!," "We get it, people died," "Are those real people?," and the sarcastic "You are changing the world with spam."[C] The transgressive performative act is validated by these reactions. A successful performance of *dead-in-iraq* inevitably concludes with my avatar being kicked from the game by a unanimous vote. The narrative of the game has been subverted. The intended audience has been reached. My fellow gamers become involuntary participants in the performance. By shooting my unarmed avatar and texting me their reactions, these gamers become implicated and essential in the creation of the work.

This could be considered very similar to the creation of real-world interventionist actions such as street theater/performance or flash mobs. The audience, whether in a federally funded computer game or on a public street, is crucial to the successful implementation of any such interventionist practice. However, there is a significant difference between online machinimatic performance and traditional real world interventionist actions. Real-world interventions rely on the creation of the unexpected within a context where people are going about living their everyday experiences. But in an online computer game, every player is also essentially a performer (Lowood 2007, 65).

Live performance of *dead-in-iraq*

Typing the names of American military casualties into *America's Army* has primarily occurred as the action of a solitary gamer/performer. Over the five-year span of the action, I have presented a limited number of performances before live audiences. Performing such a gaming intervention before a live audience changes the nature of the work in significant ways. When performing *dead-in-iraq* before a group of spectators, I sit quietly at a nondescript desk, facing the crowd, typing on my laptop (Figure 8.1). The game

action from my avatar's point of view is projected just behind me to my right. The activated "text-to-speech" functionality of the game layers a mechanical voice reading the name, age, service branch, and date of death of each fatality from the war as I input these from my list. The power of this work as a live, real-world performance is immediate and visceral. Upon the first instance of my avatar being killed, the audience reacts with an audible, collective gasp. After a performance of *dead-in-iraq* at the Banff New Media Institute in 2007, a member of the audience commented to me afterward that he thought of the work as being "Sisyphean" in the seemingly never-ending process of rebirth, typing, and death. The repeated killing of my avatar often has the intended effect: as the shadows of the real fallen soldiers in Iraq, my avatar's deaths drive home both the absurdity of *America's Army* as a computer "game" while also providing a temporal instance of memorial as a soldier's name briefly appears on screen, then scrolls away.

The live performance of *dead-in-iraq* in a theatrical setting adds another layer of audience to this act of virtual civil disobedience. The people who attend these performances tend to be individuals who do not play computer games. For many, this is often their first experience of actually watching an FPS game in action. While the essence of the creative action remains in the game, doing so before a group of spectators in a physical venue could be considered what author Stephen Duncombe (2007) refers to as an "ethical spectacle" (124–75). Although contrary to Duncombe's emphasis on developing participatory aspects to such events, I am intentionally not interested

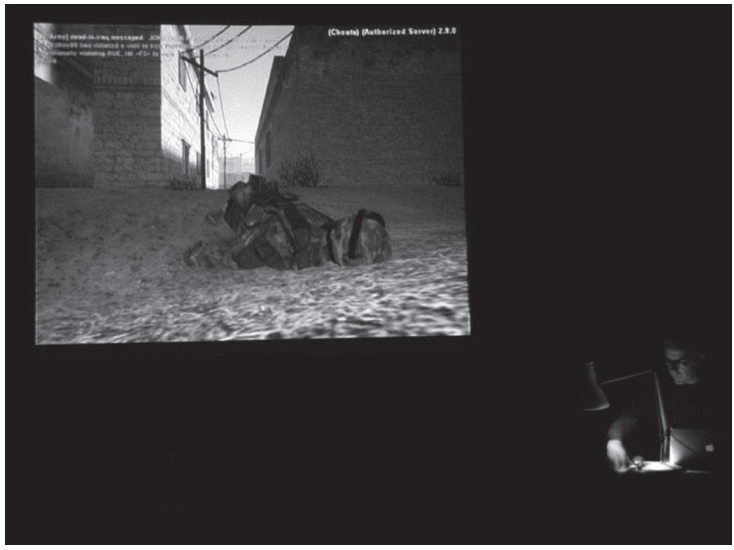

FIGURE 8.1: dead-in-iraq *in performance 2007*

in facilitating participation or interaction for the live audience of this work. The audience members are solely invited to watch *dead-in-iraq.* Although they do not actively play the game or participate in the performance, they become nonetheless significant agents in the intervention, since their presence makes the performance a "mixed reality" event. Moreover, their presence as spectators drives home the fact that our experience of the war is largely mediated (cf. Žižek 2002). The game itself is a virtual space for the repeated re-enactment of simulated battle—participatory yet highly proscribed. The typing and reading of the names retain their poignancy as direct actions in part due to the non-participatory nature of the gestures. Further, by watching me "play" the game, the audience cannot help but identify with me as performer and avatar, thus creating a temporary arena of empathetic play and political action. A temporal interstice is actualized between the players, performers, audience, and politics.

dead-in-iraq as machinima document

The first video document created in 2007 involved recording the performance of the work, as created at my desk in a manner similar to the recording of my first FPS intervention, *Howl: Elite Force Voyager Online*, in 2001.[D] The video document, entitled "dead-in-iraq, America's Army online protest/memorial" (2007),[E] was created for posting on YouTube. The action was shot using a tripod-mounted camcorder positioned to show me sitting at my desk, the page holder with the list of names at my side, the actual typing on the keyboard as well as the hand numbering of the names after they were entered into the game. Most importantly, the camcorder allowed for close-up shots of the texting area of the heads up display (HUD), which, while clearly visible to players, is rather small and does not translate well using machinima recording techniques for standard video formats.

A second, purely in-game machinima document was created in 2008. This work was developed specifically to be shown in gallery contexts as a video installation for projection or on a flat screen LCD. I recorded over an hour of the intervention using *FRAPS* (2008) software set to full-screen resolution. This resulted in a near-perfect document of the intervention and gameplay which was then edited down to just under 20 minutes for looping play-back from a CPU to a projector, thus preserving the full readability of the in-game texting and image fidelity.

In considering the efficacy of a work such as *dead-in-iraq*, it is useful to compare and contrast the varied contexts for the experience of this work as

well as the nature of the work in time. From performance online to conducting such in front of a live audience to the creation and showing of machinima documents, time becomes a shared yet varied referent. Unlike thousands of years of art objects that are typically available as situated artifacts in space, performance art is dependent upon being situated in time—available to be experienced, then gone. The temporal nature of *dead-in-iraq* as a time-dependent performance is further delineated when one considers the essential durational aspect of the work. The list of names, downloaded from icausualties.org, orders the names of the US military casualties consecutively in time according to the date on which the soldier died. Each name from the list has been input into the game only once. These have been typed into the game in chronological order. As new deaths have occurred over the five years of the project, these names have been added to the list for input into the game. The typing in of the names over time is echoed by the structure of the game in that a given match goes on until the last member of your team or of the enemy team is killed. The game keeps time by counting deaths—as do I.

When virtual or real spectators watch the intervention unfold, they enhance the work's intrinsic ties to time and counting. The work attains its potency in part by the context of the performance in time. This is enhanced by the consideration of the game as a temporal locus for live interaction and communication in the immediate. The fact that I am present in the game space with other players or enacting the performance before an audience is central to the work's efficacy as a real-time action.

The live performance of the work includes the searching in the *America's Army* server to find open games, the duration between matches for players to choose or be assigned to teams, and, finally, the waiting for the next round and map to load. These breaks between the gameplay enhance the durational nature of the work. The entire process of performing the work is intentionally slow and methodical. The primary difference between the live performance of *dead-in-iraq* and the machinima document is that, in the former, one experiences a temporal work of performance art in the immediate, while, in the latter, one watches an edited representation after the fact.

In the edited footage of *dead-in-iraq*, time is compacted to create a cohesive and engaging artifact of the intervention. The intention is to create works that both re-present the project and exist as compelling stand-ins for the actual performance. The machinima document is created as well to serve as lasting evidence or records of the temporal intervention. The 2007 video was designed primarily as an informative documentary of the project for sharing on the internet. The YouTube video is purposefully short, direct, and to the point. This was designed to relay information about the intervention and to show the

performance in action to an internet-based audience who would generally be viewing the piece in a 4 x 6" window on their home computer screen.

As a large-format projected video installation, the 2008 machinima document has an entirely different context in time and space. When situated in a gallery or museum, the work has been primarily shown in enclosed, private spaces within these larger cultural institutions. The sounds of distant automatic weapons fire and the electronic voice reading the names are generally audible upon approaching the space. When entering the installation, one sees a large-scale projection directly upon the gallery wall. As a looping projection, there is no beginning or end to the repeating cycle of gameplay, texting, and death. The performative action is limited to my POV in-game, getting shot at and floating over my dead avatar as I continue to type. The methodical process of performing *dead-in-iraq* is compacted to its base elements in order to heighten the second-hand experience and understanding of the project.

Physically standing and watching an enormous projection of this work is entirely different from experiencing the work on a tiny screen on one's home computer. As a video on the internet, the work becomes part of the morass of information and distractions available in this context. The discrete projection of *dead-in-iraq* in an installation environment provides for a contemplative setting that functions outside the chaotic flow of internet-based content. The scale of the work in this context is significant. The projection of *dead-in-iraq* realizes the gameplay and intervention at a roughly human scale. This is intentional, as this use of scale creates an equalization of visual space in reality with that depicted in the virtual game space. This creates an opportunity for a type of slippage between gallery and machinima space which, while differing from the live experience of the performance, still engages the viewer through visual scale and edited content. Although the machinima video installation presents an edited visualization of the live performance, it still effectively communicates and connects with the viewer.

The efficacy of this work was perhaps best illustrated at a showing in the Sesnon Gallery at the University of California, Santa Cruz as part of a 2008 exhibition entitled *Interruption of Hierarchies.* A young student who was watching *dead-in-iraq* fled the gallery in a very disturbed state. A member of the gallery staff ran after the student to see if he was all right. She found him sitting just off from the gallery, weeping uncontrollably into his hands. He said that he played these games all the time, that he had never thought about actual deaths in real warfare, and that he would never play these games again.

Griefer politics

Soon after I began *dead-in-iraq* in 2006, word of the "griefer" art professor "spamming" the names of dead US soldiers in the *America's Army* game went viral. Articles on Salon.com,[F] Wired.com,[G] interviews on CNN, National Public Radio[H] and numerous blog posts on game-specific sites effectively disseminated this in-game protest and memorial to millions. It was, I would suggest, the idea, the concept behind *dead-in-iraq* that effectively caught the imagination of gamers and non-gamers alike. A small fraction of those who learned of my political intervention in a computer game have actually experienced my actions in-game, watched a live performance, or viewed either the video or machinima documents. The subversion of a government-funded recruiting game as an act of protest and memorial upended expectations of traditional political agency. It is of course difficult to know whether my actions have had any discernible effect upon the recruiting mechanism that is the *America's Army* game or upon general perceptions of the war in Iraq. The project as live interventionist performance and machinima document nonetheless necessitates an expanded and critical consideration of computer games in a time of war, citizen agency, and online political protest. Further, *dead-in-iraq* serves perhaps as a model for the possible in terms of addressing real-world political and social issues through developing and distributing machinima content. It also points towards the expanded possibilities of utilizing real-time game interactions for live, performative content that seeks to blur the boundaries between player, performer, and audience.

dead-in-iraq ended on December 18, 2011, the day when the last United States troops officially withdrew from Iraq. In total, the names of 4,484 US military casualties were input into the *America's Army* game. I continue to exhibit artifacts and documents of this project, including the aforementioned projected video machinima installation.

Gandhi's March to Dandi in Second Life

In 2006, while engaged in defending *dead-in-iraq* in a heated exchange with a blog commenter, I was accused of "having a Gandhi complex." My response to this was, "if you say so!" What was intended as a pejorative insult of my motives as an artist became formative in the ideation of a new work, *The Salt Satyagraha Online—Gandhi's March to Dandi in Second Life* (2008).[I] For some time I had been thinking about expanding upon my interventionist actions online by creating a performance work in a game or virtual community that

would simply be a long walk. The notion of doing so to re-enact one of the most significant acts of protest in the twentieth century, namely Mahatma Gandhi's March to Dandi, was a culmination of both a conceptual thought process regarding live gaming performance and a wholly appropriate next step in the lineage of my work.

For this effort, however, I envisioned an entirely different interaction of the body in performance. In *dead-in-iraq*, I was crucially aware of the contradiction—protesting and memorializing dead soldiers killed in battle while safely ensconced in an office chair—inherent in protesting or, for that matter, playing an FPS game. For *Salt Satyagraha Online*, I would not simply be sitting at my keyboard to engage in this re-enactive performance. For this project, I converted a self-powered Nordic Trak "Walkfit" treadmill for use as a game controller which would require my physical steps to enable the virtual steps of my Second Life (2002–present)[J] avatar, MGandhi Chakrabarti.[K] Over the course of 26 days, from March 12 through April 16, 2008, MGandhi and I physically and virtually walked 240 miles in a re-enactment of Mahatma Gandhi's seminal act of protest. Envisioned as a live, mixed-reality, durational performance, the project took place at Eyebeam Art and Technology[L] in New York City and online in Second Life. My electronically re-purposed treadmill and specially created elevated desk were installed on a sisal rug, facing a large LCD projection of my third-person point of view of MGandhi as I guided him throughout the extensive online community that is Second Life. This live machinimatic performance was viewed by hundreds of spectators who came through Eyebeam over the approximately one-month-long daily performance (which included three rest days, the same days taken by Gandhi and his followers). During the same time frame, I came into contact with an equal number of "residents" in this online community.

This work was a "mixed-reality" live performance event, with interrelated aspects taking place both "in-world" (in Second Life) and in "RL" (real life). The audience for this work, similar to *dead-in-iraq,* was both virtual and real. This contextual co-mingling of audience and participants was an intentional constant throughout the realization of the performance. This project was being enacted in two arguably semi-public spaces—the Eyebeam gallery and Second Life. In doing so, I wanted to create a type of real-time machinimatic experience that was hybrid, intermingled, and purposefully muddled.

There is, of course, a difference between the people who stopped by Eyebeam to watch and converse as I walked on the treadmill and the avatars I interacted with in SL. An avatar in SL greeting MGandhi would logically expect that I was simply one of thousands of individuals at any given time engaged in our shared virtual context in a manner identical to theirs. Upon greeting strangers "in-world," I would inform them of my performance: "my

human is on a treadmill making me go, we are walking 240 miles in RL and SL to re-enact Gandhi's Salt March, would you care to join us?" In sharing the nature of my performance with other avatars and inviting their participation, I was revealing and acting on my intention to expand how SL can be used.

This project revolved around an explicit consideration of the possibilities of interaction between physical and virtual space. I became a truly live actor whose physical body was essential to the successful realization of the virtual work. As a historical re-enactment of a revered march of protest, it was important for this work to involve not only duration but also a physical and bodily commitment. The projected point of view in Second Life, combined with the many hours of daily walking on the treadmill, functioned to create an intense emotional and physical connection to my avatar. There were multiple instances of slippage between my physical being and my virtual presence. At times, there were also slippages on those both watching my performance in Eyebeam and joining me on the walk through Second Life. A woman who stood behind me for over an hour during the live performance remarked to me that the longer she watched, the more she began to think of me on the treadmill as being her avatar. Another individual, an avatar who joined me almost daily towards the last half of the re-enactment in SL, commented to me that she had never before "walked" to explore this online community and that the experience had altered her experience and understanding of the virtual space. She joined me in avoiding the use of flying or teleportation in SL to get from one place to another, thus experiencing the unfolding online environment in a fashion that actually reminds one more of real time and space. My daily immersion in the project also profoundly changed my awareness of space and identity. MGandhi stumbling off a mountain top would very nearly send me falling from my treadmill. Over time, the projected live machinimatic image—the simulated visual environment—became reflexively real. During off-hours walking down the subway stairs or passing strangers on the street, I found myself having a type of déjà vu where my mind's eye was temporarily back in Second Life. There were several occasions where I would reflexively think I could click on strangers on the streets to view their profiles. This temporal shift of the physical and the virtual is key to appreciating the intensity of this performative experience.

Through heightening the connective duality of the gamer and the avatar, I created a locus for expanding the consideration of play and re-enactment. As an event of live durational performance and spectacle, *Gandhi's March to Dandi* offers expanded possibilities for furthering mixed-reality performance, historical re-enactment, and machinima. The shifting of identification from performer to avatar to spectator offers some intriguing implications for

pushing the envelope of machinima as an art-form in a live context. Fellow players become co-re-enactors, and live spectators experience a multiplied third-person perspective. Further, the nature of this work as a durational event measured both in distance and time is not only crucial to the consideration of the work as a historical re-enactment but also expands upon the possibilities of live performance, audience participation, live cinema, and machinimatic content.

Documenting the march

Whether considering the work from the point of view of myself as the performer, of visitors to the performance space at Eyebeam, or from my fellow "residents" of Second Life, this work was meant to be experienced live. That said, I was very interested in effectively documenting the project. To do so presented unique challenges. The entire performance took well over 100 hours—to collect this much raw video footage either through machinima recording techniques or through video recording of my person on the treadmill was simply not a realistic option. Over the course of the month-long performance, I shot discrete segments of real-time machinima of MGandhi's wanderings in SL using *Snapz Pro* (2008) as well as hundreds of manually recorded screen shots which were complemented by video and photographic recordings of the performance in action on the treadmill. However, to effectively document the durational entirety of the re-enactment, I utilized a plug-in that allowed for the automatic taking of a screen shot of my desktop every 60 seconds. By the end of the 26-day performance, I had accumulated 6,607 screen shots that were subsequently processed and compiled to create a stop-action machinima documentary of the re-enactment.[M]

The stop-action machinima, *Gandhi in Second Life, Joseph DeLappe, 240 Miles, One frame per minute* (2008), clocked in at just under nine minutes and effectively portrays the work as situated in time. I had purposefully framed the automatic recording of the screen shots to include the menu bar at the top of my Mac screen. In watching the machinima closely, one will see the days of the week and the hours of the re-enactment pass in rapid succession with the images as recorded every minute of the march. There are two versions of the stop-action machinima—one in full-color, the other treated with sepia-toned filters to give it the look of an old silent film. The latter piece is generally shown as a projected video installation of the entire installation used for the performance, including treadmill, desk, and sisal rug. A flat-screen LCD is laid upon the treadmill showing a looping video with

the sound of my footsteps. The combination of the stopaction machinima, projected large on the wall, and the video of my walking feet effectively creates an installation of connective artifacts.

I employed a tiered methodology towards first presenting this work as a live, durational, and interactive performance in Second Life and Real Life, while at the same time seeking to effectively document the work for post-re-enactment dissemination. Machinima finds its roots in early recordings of gamers' prowess (Lowood 2007). *The Salt Satyagraha* stop-action machimima could thus be looked upon as playing a similar role: it both serves as evidence of a unique accomplishment in an online ludic context as well as pushing the boundaries of the medium to consider a different type of performative content that includes such a durational performance recorded in a purely documentary manner. Traditionally, machinima serves either as a document of play or as a medium for expressing narrative. On the contrary, the machinima created as a result of the Gandhi re-enactment functions as both records of play and documentary narratives without explicitly being either. As a document of a performance art event created in a mixed-reality context, the co-mingling of interventionist intent, interaction, participation, and re-enactivist posture becomes key. The live experience of the piece as a durational act of performance is, of course, no longer possible. The machinima document, whether shown as an installation or online, becomes a bridge towards drawing in a post-performance audience.

Politically, *Gandhi's March to Dandi in Second Life*, whether as live event or as machinima artifact, serves to explore "productive strategies of playful subversion, sly infiltration, and ironic reversals of mainstream or normative stereotypes," as Johannes Birringer describes (1998, 244). There is transgressive mischief afoot when a middleaged, white American on a treadmill re-enacts aspects of the life of a revered other, Mahatma Gandhi, who has been reified in this context as an online avatar (if it was good enough for Ben Kingsley, why not me?). This is certainly central to the conceptualization and the experience of the work. The spandex-clad performer in high-end running shoes walking on the exercise machine "works out" to effectively propel the cartoonish representation of the sandaled, dhoti-wearing Indian icon. The work takes role-playing to an entirely different dimension, where the absurdity of this juxtaposition provides a subtext for the consideration of both the live and documented content of the performance.

Gandhi in jail/*Twitter Torture* (2009)

Just over a year after the end of the Salt March re-enactment, I endeavored to continue to perform aspects of Gandhi's life by engaging in a nine-month durational re-enactment of Gandhi's post-Salt March prison term. I decided to confine MGandhi Chakrabarti, who had freely wandered throughout the extensive online community that is Second Life, in a small jail cell modeled directly from photographs of Gandhi's jail cell at the Yerwada Jail in Pune where he was interred by the British Colonial Authority just weeks after the completion of the Salt Satyagraha in 1930. My performance commenced on May 5, 2009, the 79th anniversary of Gandhi's internment. While it was logistically impossible for me to be with MGandhi 24 hours a day over nine months, my avatar sat in a meditative posture in his jail cell 24/7. A computer was set up in my home office that was permanently connected to Second Life for the entirety of the re-enactment (although there were also times where MGandhi was accessed from a computer at my university or while I was traveling abroad).

Over the nine months of the re-enactment, I spent several hours each day engaged with the many visitors to this work of re-enactive political theater. After being with MGandhi in his jail cell for two months, I became a little restless and conceived to expand upon the nature of the re-enactment. On April 16, 2009, just prior to the start of my re-enactment, the Obama Administration released the controversial Bush-era "torture memos" (MacAskill 2009).[N] On Independence Day, July 4, 2009, MGandhi began daily readings from these infamous documents. In what could be considered a performance within a performance, I worked to have MGandhi "read" from these memos in a work that was eventually entitled *Twitter Torture*.[O] For this work, MGandhi sat typing, word for word, one page a day from the "torture memos" into SL local chat. The reach of these texted performative readings was extended beyond the confines of the jail cell and Second Life by utilizing an SL plug-in, *Twitterbox*, to transmit his text messages from in-world live chat as updates to both my Twitter and Facebook accounts. In both of these social media accounts, I changed my profile photograph to a portrait of my MGandhi avatar. Thus, I created a three-tiered live performance that bridged the gap between the virtual community and these popular social media platforms.

As a live performance 24 hours a day, my avatar existed primarily as an animated representation of Gandhi sitting in the lotus position on a pillow at the back of his jail cell. In what was a reversal of the physicality necessary to complete the Salt March re-enactment, I was for the greater proportion of the time "away from keyboard" (AFK), while my avatar "performed" in

my absence. As a real-time machinimatic event, the autonomous avatar became the primary performer. When I was not present with MGandhi in jail, the setting was perhaps similar in appearance to a museum diorama or a historical site with mannequins in period dress. Yet the interactive and cinematic nature of this online, three-dimensional virtual space allowed visitors to watch MGandhi meditate, explore the prison grounds, read the text posted on the sign outside the gate describing the performance, and, if they so desired, leave MGandhi a message which I would answer as soon as I returned to the keyboard.

This, of course, raises interesting issues regarding "durational" performance online, calling into question artistic commitment and the problematics of the avatar as an autonomous stand-in or actor. This project was strongly influenced by Tehching "Sam" Hsieh's *One Year Performance 1978–79* (1978–9), where Hsieh had himself put into "solitary confinement" in a jail cell fabricated in his studio space.[P] Unlike Hsieh's work, which involved an unprecedented level of physical commitment as performance art, my avatar served as a type of stand-in for what was more a symbolic act of durational and virtual imprisonment. At the same time, it is important to note that during the performance, my thoughts, if not my physical being, were perpetually aware of my avatar over the course of any given day. As I went about my daily activities in real life—eating, sleeping, teaching, or working on my laptop at my desk adjacent to MGandhi's computer—I was constantly checking in with MGandhi, answering instant messages and doing my best to be available to fully interact with visitors. While the artist may not have always been present, the existence of my benevolent doppelganger in SL retained a level of constancy in my consciousness.

The audiences for this work in Second Life and secondarily via the torture memo readings as re-posted to Facebook and Twitter experienced what was a multi-layered and intentionally disparate experience of the work. For all of my time in Second Life during the nine months of the performance as well as the seven months from July 2009 through January 2010, I posted to my Facebook and Twitter accounts only the daily readings from the torture memos. I was seeking to create a manner of durational performance online that might not have been constant, but was in fact committed and totalizing in terms of my actions as an artist.

This work was primarily documented using screen shots taken within Second Life, Facebook, and Twitter. I recorded only a very brief machinima segment of MGandhi typing that I show when lecturing about the project. I was quite intent on developing this work primarily as an experiential event to be engaged by the residents of Second Life, my "followers" on Twitter, and my "friends" on Facebook. My actions in this work served to use MGandhi's

virtual jail cell and prison compound to stage a work where the authority of the performer and the cross-platform reach of the durational act functioned to deconstruct presence, engage in experimental stagecraft regarding political prisoners in history, while at the same time exposing the machinations of detention and torture. As a live machinimatic act, the work thus further pushes the boundaries of time, stagecraft, and role-playing in a durational performative space.

the *gg hootenanny*

The performative reading of the "torture memos" and MGandhi's imprisonment ended when MGandhi was released from his cell on January 26, 2010, to coincide with the 79th anniversary of Gandhi's release from prison in 1931. To commemorate Mahatma Gandhi's actual release and to celebrate MGandhi's completion of the re-enactment, I planned a day-long series of live performances entitled *gg hootenanny!—Gandhi's Release Party and Global Gaming Sing-along!* (2010). The event began with the members of "Second Front,"[Q] Second Life's first performance art troupe, freeing MGandhi from his jail cell using jackhammers, a bulldozer, and explosives. This was followed by four one-hour "telematic sing-alongs," where residents of Second Life were invited to sing and play music on a typical rock concert stage festooned with flags and gigantic rows of speakers now sitting in the space once taken up by the walled prison compound. To the left of the stage sat MGandhi's now empty jail cell and a viewing platform for the expected dignitaries.[R]

Residents of Second Life were invited to attend and participate in this event in character as their favorite celebrity. What transpired was a day-long DIY music festival consisting of a series of live sing-along performances taking place throughout the day that were modeled after charity concerts such as "Live Aid" in 1985[S] or "The Concerts for the People of Bangladesh" in 1979.[T] The musical performances took place entirely within Second Life with everyone singing and playing along from remote locations using voice chat. Thus, avatar "luminaries" such as Sponge Bob Square Pants, Hello Kitty, Pope Benedict XVI, Prince Charles, Sarah Palin, Master Chief, King Kong, Woody Guthrie, Cicciolina, and Darth Vader, among others, joined MGandhi to sing classic songs of freedom and protest ranging from Bob Dylan's "Masters of War" to Arcade Fire's "Window Sill." Individual one-hour concerts were strategically timed throughout the day and evening to encourage participation from a diversity of time zones from throughout the world. The performances were also webcast on *Ustream* (2007) to allow those without SL accounts to view and listen to the event.

The resulting sing-along was a joyful experiment in telematic, participatory, machinimatic performance. The collective use of voice chat to play instruments and sing, the varying connection speeds and locations of participants worked perfectly to facilitate wildly chaotic renditions of the songs in question. Many who participated in this experimental sing-along related to me sentiments similar to one Pete Wardle: "The sing-along was the most fun I've had in SL!" The combined energy of dozens of participants raising their voices in song utilizing the primitive voice capabilities available combined to create a most memorable event that was best experienced in the immediate. I recorded several of the performances, one of which, *gg hootenanny—we shall overcome*, (2010), is available online;[U] yet machinima in this case truly fails to capture the essence of what transpired on that day.

Furthermore, the significance of this work is its effective context where individual spectators became participatory and collaborative partners in the creation of the live performance. Each participant experienced the sing-along from their individual point of view both as a performer and spectator. Voice chat, whether used in an online FPS or a virtual community, can often be an awkward and interruptive presence. The relative anonymity of the online space helped facilitate an expressive, temporal community of voices. Inviting residents to sing together using voice chat was a type of negative strategy to counter these expectations, thus challenging the normative structures of this popular online context. The *gg hootenanny* was thus a transgression of a proscribed context with unexpected visual, participatory, and aural content. The hermetical confines of Second Life were transcended by the discursive, collective voice and musicality in real time. This further represents a possible modality for rethinking machinima in a live context.

Machinimatic performance

For the experimenter, like the extremist or radical, being at the outer limits is an important condition for jarring into focus attention to urgent issues, but the experimenter's issues are philosophical rather than esthetic. They speak to questions of being rather than to matters of art.

KAPROW 2003, 69

How do we begin to identify and analyze such intentionally hybridic and experimental creative practice? Is it important to categorize genre-mixing events such as *dead-in-iraq* or *The Salt Satyagraha Online*? These works share, to varying degrees, aspects of performance art, historical re-enactments, live

cinema, telematic art, mash-ups, political activism, and machinima. In each instance, a type of conceptual performance art theatricality ensues that has undeniable similarities to machinima, yet, unlike conventional machinima, in all of these works there is an intentionally interventionist attitude and anarchic realizations that seek to connect directly, in real time, with participants and spectators alike (whether in real life or online).

Performance art exists as a contested term referring to creative practice that is at once anti-theater, interdisciplinary, scripted or unscripted, carefully planned or based on chance operations, with or without an audience, carefully documented or fleetingly temporal. Its beginnings can be traced to early twentieth century art movements such as Dadaism, Futurism, and Constructivism, followed by mid-century developments such as action painting, Allan Kaprow's "Happenings," and the Fluxist movement. Performance art is a field of practice that continues to defy easy categorization, yet it has grown into a respected arena for creative experimentation ranging from solo actions to globally transmitted multi-media events.

Machinima, on the other hand, is a camera-based technique and art-form, albeit a virtual camera that is either a cambot or the recording of the pov of a designated player. The use of cameras, whether for recording still photography, film, or video, has been key towards documenting performance art practice. It is perhaps ironic that ephemeral performance events that were in part representative of the dematerialization of the art object have been some of the most mechanically documented artworks of the past 50 years. The performance art document has an established function both as an evidentiary tool and as a means to increase the dissemination of performance art content—this remains true whether performing in real life or in online virtual contexts.

I have utilized machinima techniques both in live performance and as a documentary tool in the works described here. There are, of course, key differences between machinima and live performance created within a computer game or online community. While machinima actively re-purposes virtual spaces for creative production, it is viewed in a manner that reflects the passive, non-interactive nature of traditional time-based media. Machinima is generally watched like a TV show, and in fact, more often than not, directly mimics both the structure and content of popular television and film.

However, experiencing a live, creative interloper conducting unexpected or contrarian actions within a computer game involves a level of immediacy and encounter that heightens the potential for a significant ludic experience. This is an old argument, as expressed by Walter Benjamin in his 1930 essay, "The Work of Art in the Age of Mechanical Reproduction." Benjamin writes: "there is indeed no greater contrast than that of the stage play to a work of art that is completely subject to or, like the film, founded in, mechanical reproduction"

(Benjamin 1969, 229). Performing live in a computer game perhaps presents a step sideways from Benjamin's theories in that one is indeed performing live, as in a traditional performance artwork, yet the performance is mediated through the interaction of virtual cameras and avatar controls more akin to a puppet show than to that of a live actor on stage. Nonetheless, live interactions in an online game, whether through proscribed play or as performative intervention, resonate differently from viewing recordings of the same after the fact.

As a point of illustration, consider Chris Burden's seminal 1970 performance piece "Shoot".[V] As a live performance, the very fact of the artist being physically wounded by a real bullet fired from an actual rifle is essential to the power of this work. Let us imagine, for the sake of argument, that rather than actually having himself shot, he had made a painting of the same content or perhaps staged the action for film using special effects. The efficacy of this work relies on the essence of the actions being rooted in reality, in a real experience. It is the very actuality of the transgressive act in a real-life situation that gives this performance and, indeed, all performance art its power. The same principle holds true in an online, real-time machinimatic performance. The function of being an unexpected participant in a live, interventionist performance within an FPS or virtual community is very different from that possible through the delayed process of machinima creation and presentation. Live in-game performance relies upon the expectation of players for a real-time, in-the-here-and-now experience. Machinima exists after the fact to exploit online ludic contexts for an experience of content that is to be engaged outside of those original contexts. To be in the context of a live in-game performance is to experience an event that is more than likely only to happen in that singular time and place, never to be repeated. To watch a machinima, or for that matter to play most computer games, is to engage in content that can be repeated *ad infinitum*.

It is further intriguing to consider, in relation to the development of ontology for online gaming performance, the vastly divergent cultural positioning of machinima and performance art. Machinima may be considered "low culture" as compared to performance art's position as an accepted form of "high culture." In this there is a creative tension that provides ripe territory for creative adaptations or the possibility of marginalization. While performance art has roots deep within a rarified history of modern and contemporary art, machinima may truly be considered a new art-form created entirely outside of the contemporary art mainstream. How does one compare, for example, a popular work of machinima such as *100 Ways to Die In Modern Warfare 3* (2011)[W] with the machinima documentary of *dead-in-iraq*? The former is a shooter-based snuff film with a comedic techno soundtrack, while the latter is a critical consideration of the consequences of virtual and real-world

violence—a type of machimima verité, if you will. I have argued that colliding these two worlds of machinima and performance art presents unique opportunities for unexpected temporal synthesis between audience, players, performers, and politics. By expanding upon the consideration of machinima as an art-form to include potentialities of live in-game performance, one opens up new realms for creative possibilities in games and online communities alike. By taking agency through combining normative creative structures such as performance art and machinima, the inherent flexibility and limitations of both are engaged, expanded, and re-contextualized.

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9

Virtual lens of exposure

Aesthetics, theory, and ethics of documentary filmmaking in Second Life

Sandra Danilovic

Cyberspace is the space of apparition, in which the virtual and real not only co-exist, but co-evolve in a cultural complexity.

ROY ASCOTT 2003, 278; EMPHASIS IN ORIGINAL

Introduction

The practice of filmmaking inside virtual reality (VR) worlds is fraught with complex philosophical, ethical, and aesthetic dilemmas due to its fairly recent emergence on the scene of new media practice, filmmaking, and web content creation. This chapter is a reflective analysis of machinima informed by my own filmmaking practice inside the immersive environment of Second Life (2003–present) and by delving into the aesthetic and philosophical framework of *Second Bodies* (2009),[1, A] my documentary on the intersection of female self-image with virtual reality, technology, and Baudrillardian cultural theory. Second Life is a canvas for users to paint and re-invent their own images of themselves, and is thus the ideal medium for the autobiographical, point-of-view, or poetic-address documentary. *Second Bodies,* which blends real-life and Second Life recordings, becomes my vessel for exploring machinima practice, theory, aesthetic expression, and ethics of virtual documentary filmmaking. This chapter is also a brief foray into the ontological differences between traditional forms of documentary filmmaking and documentary-based machinima practice, or what I shall refer to as "docu-machinima." In particular, the ethical aspect of documentary filmmaking in Second Life will be discussed in terms of how non-fictional perspectives in virtual worlds have the power to expose compelling information that may penetrate real-life identity.

Docu-machinima may be seen to be an extension of documentary filmmaking, whereby "the imaginary space of a game is explored with the appropriated discourses of a documentary" (Horwatt 2008, np).[B] Compared to avant-garde films, which according to filmmaker Mike Hoolboom are "documentaries of the imaginary" (quoted in Elwes 2005, 187), docu-machinima can frustrate filmic and documentary conventions in its quest to interpret fantasy-driven animated worlds occupied by virtual proxies of human beings, many of which are anonymous players in the virtual universe. In the case of Second Life, these imaginary worlds and avatars are created by players/users themselves. In the sphere of machinima and VR worlds, avatars are "living," three-dimensional animations of users existing in real time that are also endlessly changeable, possessing infinite capabilities for aesthetic experimentation and creative expression. A user may choose to have multiple avatars or skins for their avatars. Telling stories that transcend the boundaries of real-life documentation while capturing alternate representations of human existence becomes easily accessible and democratically open to all web content creators, including filmmakers, artists, and the general public. Sherry Turkle's (1984) statement—that "computers offer the possibility of

creating and working within artificial worlds, whether to simulate behavior of economies, political systems, or imaginary subatomic articles" (81)—equally applies to filmmaking practice. Second Life exemplifies an artificial world, a microcosm and extension of the real world that even has its own market economy and currency (the Linden dollar).

Machinima as an emerging media art-form is still in its infancy and thus posits a new frontier of filmmaking practice that re-defines and re-invents traditional filmmaking practice and theory. Machinima as a virtual form of professional and amateur filmmaking affords practitioners the ability to bypass the animation process altogether by modifying, creating, extending, and appropriating their own virtual experiences with the engine of the virtual universe. Evolving generations of machinima filmmakers are not merely niche, fan-based creators; they are also "artistic directors seeking to orchestrate and express their individual vision whilst encapsulating their creative inspiration and situating their work within the machinima tradition" (Harwood 2011, 8). Machinima aesthetics also defy limitations in storytelling, visual composition of shots and creative-visual expression, offering new methods of generating subjective interpretations of self-experience, self-image, and identity while frustrating simple delineations between offline and online identity.

Ontological differences: docu-machinima vs documentary film

Focusing on essential attributes, the ontological differences between docu-machinima and liveaction documentary exist with various tensions. Both methods of storytelling intertwine, overlap and contrast, unifying body, mind, affect, computer, thought-processes and observation into a complex immersive and interactive experience. However, there are also differences. For example, in machinima the physical camera is absent as an object of reference for both camera operator and subject, as opposed to live-action filmmaking where the camera is physically present, seen, felt, and operated. Inside Second Life, we learn to shoot without the camera's virtual representation (in other words, there is no visible virtual camera viewfinder other than the capture screen browser), and we follow subject-avatars as digital embodiments of real-life users. Just as we cannot feel our virtual bodies inside a virtual world—we only see them represented by 3D avatars on a computer screen—likewise, we can neither feel nor see the virtual recording device, which is similarly invisible to the object of the camera's gaze (subject). As Lanier (2010) states, "you are no longer aware of your physical body. Your

brain has accepted the avatar as your body" (187). Consequently, we slowly accept the virtual camera as part of the act of seeing in a VR world because we have little or no haptic awareness of either the virtual camera, our avatar's body, or another avatar's body in VR space.

In a way, this process of recording is similar to computer animation, which is created solely on the computer workstation, yet it is also strikingly different: the virtual camera records action occurring in a 3D virtual space in real time with human users behind their avatars. This act of recording virtual action in Second Life is twofold: we record video and audio[2] not only via our browser view (i.e. avatar's point of view), but also via another, usually hidden, interface—the capture screen software. As a result, other present avatars (or users) have no knowledge of our recording in Second Life unless we disclose that information as machinima practitioners. For example, we may zoom into an avatar and record action in extreme close-up without its user's knowledge. The ethical dimensions of surreptitious recordings inside VR become an interesting conundrum, given the usual anonymity of users. The user-subject inside Second Life may also have a reduced opportunity to "perform" or become nervous in front of a camera, which is common in real-life documentary recordings, but does not apply to Second Life because there is no visible camera.

The initial stages of learning to function inside a virtual world as a filmmaker and to gain experience of the machinima process can be disorienting and confusing, akin to a discombobulated state of being. In its early history, the Second Life browser software allowed users to shoot in-world action with a camera embedded within the browser (now only still images may be so recorded). In other words, machinima is not simply a tool for recording a story or version of events in virtual space, but a relationship to technology in filmmaking practice which blurs boundaries between human, computer, and tool. Noting Heidegger's view on technology, Donohoe (2008) writes: "the world itself has become technological. In this way, it is no longer a system of tools to be used by humans, is no longer merely an instrumental way of thinking, but has become the very way the world itself appears" (260). The virtual camera/lens in machinima is a similar concept—it is an entity that is inherent, much like the eye is an organ embedded in the socket of a human skull, and its presence taken for granted.

Yet the virtual camera/lens also facilitates a new breed of representation. As Belting (2005) states: "the old spectacle of images has always changed when the curtain reopens onstage and exhibits the latest visual media at hand. The spectacle forces its audience to learn new techniques of perception and thereby to master new techniques of representation" (313). In this case, the virtual lens documents our subjective and observational

experiences as non-fictional accounts inside a virtual reality world. We embody a cyborg triad identity—the wired user, the machinimator, and the avatar—in a 3D environment where the camera's angle of view is embedded in our movements and maneuvers. We operate with keyboard arrows (camera movement and tracking shots), or specific keys (zooming in or out), or a 3D mouse, using point-of-view, first-person shooter[3] or third-person shooter mode.[4]

I argue that, as a result, our consciousness merges with technology to create indistinct and fragmentary digital entities of body, mind, computer, and lens through which we record action. VR becomes a mode of questioning our connection to the world, technology, space, reality, and fantasy. Donohoe (2008), again referencing Heidegger, states that inside a technological world, we are rooted in coordinates, not a "place of tradition" (262), so that this "loss of place" and subsequent "homelessness" (264–5) becomes our defining notion of cyberspace, much as the loss of physicality becomes a defining factor of digital existence. "Your brain starts to believe in the virtual world instead of the physical one" (Lanier 2010, 185). In other words, "the body and the rest of reality no longer have a prescribed boundary," and VR becomes a "consciousness-noticing machine" (187). As this loss of body and physicality becomes accepted by the mind, machinima filmmakers must learn to confront and work with the metaphysical, ethical, and practical implications of filming inside the abstract space of virtual reality.

In this way, the universe of machinima and gaming worlds can also serve as an interesting reflection on the animation of the virtual participant's physical body. For the first time in history, a user can enter the gaming world and embody his or her animated self instantaneously as a manifestation of his or her likeness, *alter ego*, or some form of hybrid. The philosophical discourse on gaming worlds and machinima can now include players as subjects and their incarnations into virtual identities and fantasies inscribed onto the animated body. Ontologically speaking, an animated-digitized body exists only insofar as there is someone controlling that body in virtual space. As soon as the gamer ceases to control the avatar by, for example, logging out of the game or virtual world, the avatar will exist only latently.

The *animated-ness* of VR may thus be perceived as the provision of a method for reinterpreting our personal stories within the structure of animated bodies and shapes, forcing the virtual filmmaker and viewer to contemplate and reconsider notions of the photographic image/likeness and its basis in reality, in particular relating them to ontological discrepancies between animated and real bodies/identities which become fuzzy in machinima. We revel in the novelty of the animated-ness of our avatar bodies and faces; we take pleasure in their crudeness and caricature-like qualities; we accept their

aesthetic and technological limitations; and we play by experimenting with online identity constructions. Are documentary subjects acting out their *alter egos* in docu-machinima, or are they negotiating their offline identities? Or is there a hybrid of the two? This is a crucial ontological and ethical question of docu-machinima.

On the subject of animated bodies, of which three-dimensional gaming avatars may be considered an extension, Bouldin (2004, 10–11) aptly states that

> [A]nimation constantly negotiates its place between reality and fantasy. Animation is, in fact, intimately connected to the very real, very grown-up world of sex, race and the politics of the body.…Although often fantastic, animated bodies are far from fake (7)….The animated body evokes a hybridized materiality that fuses bodies, media, and technologies, and plays with and blends different registers of the "real" and the "fantastic".

Extending from that, the subject's animated Second Life persona may be said to be as real as it is unreal (fantastic), so that the camera cannot reveal which is which, unless it records the user in real life for comparison. For this reason, my machinima film, *Second Bodies*, frequently intercuts from real life to VR because only then can we gauge a more complete image of the real-life subject. As an avatar, the subject is mysterious and unfathomable, a phantasm, a ghost in virtual reality, much like Roy Ascott's (2003) characterization of cyberspace (quoted at the beginning of this chapter) as an "apparition" where the offline and online components of identity interweave.

Second Bodies and docu-machinima narratives

Second Bodies is my semi-autobiographical machinima documentary on female self-image, mental illness, disability, and virtual love, inspired by French philosopher Jean Baudrillard's theory on media culture and communication technology. While this film presents a simultaneously intimate, philosophical, and abstract inquiry into the aforementioned subjects, it is not, however, structured as a traditional documentary narrative. For example, although Jean Baudrillard is not interviewed as a classic subject (i.e. a "talking head"), he is nonetheless a constant presence whose ideas are represented visually and thematically throughout the film, using quotations and audio excerpts.

VR and the immersive world of Second Life are vehicles for all three subjects in this film (Annette Smith, Michele Gardner, and Sandra Danilovic)

to mirror themselves by indirectly questioning the meaning of what is real and what is virtual, two spheres that the film ultimately argues cannot be distinguished from one another in a Baudrillardian world. In *Second Bodies*, the worlds of real life and VR (Second Life) merge almost seamlessly. Human connectedness and communication exist on an axis of simulative experiences. On his concept of the "hyperreal," Baudrillard (1994) writes: "simulation is no longer that of a territory, a referential being, or a substance. It is the generation by models of a real without origin or reality" (1). He asserts: "now the real is never sure" (14). *Second Bodies* constantly reiterates this Baudrillardian negation of real versus virtual by representing the idea in the intercutting of VR and real-life footage. For example, the end sequence in the film blends footage of real-life dancers at a Toronto dance club with avatar dancers in a Second Life dance club. The film intercuts between these two settings in a frenetic montage[C] to symbolically blur the line between the real and the virtual (the intention is to confuse the viewer as to which is which), in the process conveying Baudrillard's idea that this assumed binary of real versus virtual does not exist in contemporary culture (Figure 9.1).

FIGURE 9.1 *Images from Second Bodies: those on the left are from VR (virtual reality); those on the right are from RL (real life). When edited in a rapid montage, the Second Life and real-life images are not easily discernible*

Baudrillardian concepts inspire the experimental structure and narrative of *Second Bodies*. The film argues that the re-invention of our own narratives and selves in Second Life is a strong desire driven by the need to escape the "terrifying objectivity of the world" (Baudrillard 2008, 39), similar to other

forms of media, including cinema and television. Baudrillard states that "we are currently derealizing (this world); perhaps it is to escape the ultimatum of a real world that we are currently rendering it virtual" (39). He adds: "we live on the basis of a vital illusion, on the basis of an absence, an unreality, a non-immediacy of things" (7). This statement epitomizes the key idea behind *Second Bodies*: "virtual reality and other similar media offer this absence and void that we crave in our quest for maintaining the illusion of perfection, of happiness, of utopia" (Danilovic 2009, 1). In *Second Bodies,* Second Life represents the aforementioned ideas in that it affords all three participants in the film an "infantile method of denying the objective realities of life" in terms of pleasure, pain, and individual psychosocial consequences, i.e. feelings of shame, guilt, inadequacy, otherness (lack of belonging), and poor self-image created by decreased abilities to cope with problems (Danilovic 2009, 3). However, this escape into Second Life from the negativity, frustrations, and discomfort of real life is a fallacy. Second Life and the "virtual illusion" it affords do not necessarily provide "a total immunity" (Baudrillard 2008, 43) to the complexities of real-life existence—pain and discomfort are just as present as pleasure. A documentary filmmaker may capture harm inflicted on a subject as it happens in real life (e.g. war footage or conflict), causing the viewer to recoil in horror or outrage. A docu-machinima filmmaker's recording of a similar event in Second Life may re-frame the act of violence as a comic caricature, such as the Second Life assault on "virtual real estate tycoon" Anshe Chung in 2006 by griefers who showered "a torrent of pixelated male genitals … upon the victim" (Jardin 2006, np).[D] Although "merely" a virtual attack, the pain (in this case, psychological) inflicted can be just as hurtful. The pleasures of escapism from real life are thus negated and destroyed, and the virtual domain as an extension and reflection of human behavior (and real life) is correspondingly reinforced.

Virtual lens of exposure: representation and ethics in docu-machinima

In the framework of ethics and representation, VR and gaming worlds can be a problematic and contradictory venue for recording authenticity. VR obliterates and confuses the boundaries of virtual and physical, in turn confounding real and mock identities which affect, merge, and migrate from one sphere into another. The study of avatar identity construction is a compelling area of research that explores the relationship between online and offline identity in gamers. For example, Stanford University researcher Jeremy Bailenson

demonstrates that "changing the height of one's avatar in immersive virtual reality transforms self-esteem and social self-perception" (Lanier 2010, 4). To this, Lanier comments: "Technologies are extensions of ourselves, and, like the avatars in Jeremy's lab, our identities can be shifted by the quirks of gadgets" (ibid.). Similarly, in *Second Bodies*, Annette Smith claims that in Second Life she can be "a more confident version of [herself]" than in real life, where she suffers from the stigma of bipolar disorder. *Second Bodies* thus inquires into these questions of self-image and identity, as well as how we convey our core being through the virtualized body (avatar identity) and technology at large, particularly via exploring the 3D avatar's role in modifying our self-image. The possibilities are endless in the capturing of identity as it morphs from real to virtual and vice versa through the act of producing machinima.

In contrast, Baudrillard (2008) argues that technologies are "expulsions of man" (37) as opposed to McLuhan-esque extensions of man: the human being's existence in a real, physical space is replaced by a digitized version, a replica that can exist without the physical presence of that human being, "a real without origin" (Baudrillard 1994, 1). The identity of the real human is thus subject to appropriation, deception, and negation in VR. An avatar's identity can exist even after its human user is physically dead, or, if password and account information is shared or plundered, appropriated by another human being to take his or her place.

The identity of a virtual filmmaker can thus be immortalized as an entity that lives beyond the life span of the original user behind the avatar. Consider the publicized story (and performance) of Douglas Gayeton, a machinima filmmaker whose observational documentary of Second Life subcultures was acquired by American HBO in 2007. *My Second Life: The video diaries of Molotov Alva*[E] chronicles the story of Gayeton who "disappeared from his California home" and "began issuing video dispatches from Second Life" (Pasick 2007, np).[F] The film's premise is clear: real man is ejected into the netherworld while avatar still lives on, both as myth and reality. VR can thus synthesize both McLuhan-esque extension and Baudrillardian expulsion of identity as the avatar becomes self-contained and latent as an account profile to be activated at any time and by any entity, live or artificial. If appropriated by a live person, the avatar lives on in cyberspace, transferring identities. If plundered by artificial intelligence, a bot controls the avatar. Affirming the ambivalent nature of cyber-identity, Slavoj Žižek (1997, 139) writes that VR and computers

> [reduce] individuals to isolated monads, each of them alone, facing a computer, ultimately unsure if the person she or he communicates with on

> the screen is a "real" person, a false persona, an agent which combines a number of "real" people, or a computer program.

In *Second Bodies*, the three main documentary subjects are followed and filmed in both VR and real life in order to concretize their identities. However, filming subjects without access to their real-life identities (such as Michele Gardner's ex-boyfriend-avatar, discussed below) could pose problems in negotiating the authenticity of VR identity. Creatively and philosophically, this conundrum could be exploited in the narrative in questioning these very same contradictions and frustrations of online and offline identification.

Filming inworld thus becomes as much an ethical minefield as real-life documentary filmmaking in that privacy can become a liability for the subject. Consequently, machinima can become a powerful tool for both surveillance recording and exposé, with accompanying ethical implications. In Second Life, clicking on someone's user profile window can reveal personal aspects about the user, should the user choose to exhibit them. VR and online cultures paradoxically re-frame intimacy and privacy by normalizing both yet always transcending the boundaries of information disclosure. Second Life and *World of Warcraft* (2004) are seen to perpetuate the invasion of user privacy, and whose detection is difficult. In her article, "Second Life: Privacy in Virtual Worlds," Janet Lo (2009, np) warns that

> Second Life residents may feel anonymous in their online activities … thinking that their actual identity is insulated from public scrutiny, and thus might engage in activities that they would normally avoid in their everyday lives, (potentially taking) risks they might not otherwise take in real life such as developing parts of their identity they would not feel comfortable exploring in the real world.[G]

Lo argues that "connecting the avatar to the person behind the avatar" is fairly easy; Linden Lab requires users to create accounts that accurately reflect real-life personal information, so that their Second Life avatar names in effect merely provide an illusion of anonymity. In the context of machinima, filmmakers can exploit these flaws, endangering the privacy of users who sometimes disclose their most intimate fears, desires, and vices (Bugeja 2007).[H] Ultimately, machinima becomes another tool in this collective arsenal of privacy infringement fueled by online interactivity.

Another issue in ethics and representation for docu-machinima is that of journalistic reportage/documentary undertaken by "citizen journalists" in VR who expose important and compelling perspectives on real-world events or social issues. Journalistic reporting and the so-called exposé documentary is

conducive to the medium of machinima, much like how other online cultures (such as Twitter) foster user-generated content in providing socio-political dissent on world events. Henry Lowood (2008) places the importance of the machinima movement in the context of user-generated content documenting and expressing real-life events, discussing in particular the example of *The French Democracy* (2005),[1] shot by Alex Chan (online alias Koulamata), a user of the machinima game, *The Movies* (2005). This machinima is Chan's social commentary on the racial riots in the African and Arab neighborhoods of Paris in late October 2005, recounting the story of discrimination and victimization of ethnic minorities in France. *The French Democracy* was widely disseminated, "rapidly distributed through numerous game Web sites, blogs, and movie download sites on the Web and ignited a passionate discussion on *The Movies* Web site and elsewhere" (Lowood 2008, 167). In its success, *The French Democracy* affirms machinima's role in reinforcing the re-invention of online journalism that includes the voices of ordinary users and amateur documentarians. As Lowood writes, "it is of course important to acknowledge that the production and circulation of gamebased content might open up new means of public and creative expression, and not just for gamers" (168).

At the same time, the ethics of citizen journalism comes into play when authenticity and validity become questionable in the context of online amateur reporting. How do we ascertain the legitimacy of citizen journalism through machinima-based filmmaking (which equally applies to any form of user-generated content)? Citizen journalists are not required to abide by journalistic rules or standards that apply to professionals. Therefore, user-generated content can potentially undermine traditional notions of credibility in new media reporting. Despite the wellmeaning efforts of professional journalists like Jonathan Dube, who created The Bloggers' Code of Ethics (cited in Friend and Singer 2007, 16) and who believes in the power of a "populist democracy" (ibid., 15), citizen journalism remains fraught with complex ethical considerations. Yet these commonly perceived ethical problems of citizen journalism may be ultimately irrelevant. Bentley (2011) argues that citizen journalism does not entail reporting the facts per se; more accurately, it is about *storytelling* that matters to the community. "A citizen journalist or blogger lives the story" (116) and reports self-reflexively:

> [C]itizen journalists don't want newsroom jobs—they just have something to say. And often they want to say it because those of us on the professional side are too busy with the big stories to see the little items that mean so much to people. (Bentley 2011, 104)

Citizen journalism, as practiced using machinima and other new media formats, thus subverts the conventional model of "reportage credibility"

by the very act of challenging professional journalism. In this way, citizen reporters and documentarians may provide an alternative window and a more personalized lens of exposure which may also speak from an insider's perspective.

Machinima aesthetics and film grammar

The aesthetic possibilities of docu-machinima are very exciting and lie, in my opinion and as in the case of *Second Bodies*, most sublimely in the poetic representation or point-of-view documentary address, which captures the subjective and immersive experience of a subject. According to Kirschner (2011), animation's strength lies in its abstract properties, which he argues to be machinima's biggest potential for growth (23). These abstract qualities could apply to both narrative and visual aesthetics, especially as they relate to emotional and psychological interpretations of narrative and subjective states. The point-of-view poetic address can thus present a rich opportunity for the documentary machinimator to present her visual storytelling sensibilities and perspectives. The machinimator can, for example, more easily rely on the juxtaposition of color schemes, abstract shot compositions, and unusual camera angles to portray powerful emotional landscapes and make compelling aesthetic statements. Filming using boldly colored and animated virtual worlds and game engines can become visually hypnotic and visceral for the viewer, rife with visual metaphors, emotional interplay, and subtext. The animated-ness of virtual worlds can also connote childlike states of amazement and fantasy; a filmmaker making docu-machinima can re-frame the human experience within these worlds by referencing our childhood fascination with animated forms and representations, which can become a fascinating artistic inquiry on its own. The animation and documentary genre hybrid has in the past proven to work splendidly in the representation of subjective states, such as in the short documentary film *Ryan* (2004) by Chris Landreth.[J] This documentary is a powerful aesthetic representation of subjective realms: "in *Ryan* we hear the voice of Ryan Larkin and people who have known him, but these voices speak through strange, twisted, broken and disembodied 3D generated characters … people whose appearances are bizarre, humorous or disturbing" (National Film Board of Canada 2003, np). I argue that machinima can capture similarly gripping visions and aesthetic expressions that connote personal, emotional, and abstract states, concepts, and existences. As Italian New Wave filmmaker Michelangelo Antonioni (2007, 100; emphasis in original) comments:

> Traditional images are no longer capable of representing the world … there's the need, I think, to recommence from zero to experiment with new ways of representation … the spectator must operate on his own, almost creatively. One says *seeing* a film, *reading* a film. These words are now no longer suited.…So, it is more right to say that today we must *feel* a film.

I argue that Antonioni's vision can be applied to viewing a docu-machinima in point-of-view address because worlds like Second Life can tap into psychological, emotional, and spiritual realms to visually and poetically represent psychological states (pain, suffering, pleasure, joy, shame, *etc.*). Intellectualizing (reading, seeing) becomes a layer embedded in the aesthetics of eliciting a powerful viewer response.

The animated and eccentric avatar bodies and gaming spaces of VR may thus be inscribed with powerful visual connotations of the subject's desires, psyche, self-image and identity evolution. In *Second Bodies*, we learn that Annette Smith's early avatar in Second Life was a "goth chick," a symbol of her childhood rebellion. She later adopts a "fat" avatar, which is representative of her real-life body (presenting a statement of pride in her physical appearance), which subsequently morphs into a "skinny" Furry (Figure 9.2). The three avatar identities[K] symbolize her idea of embodying otherness. She explains in the film: "I like the Furry avatar because it's another way to make a body for myself that's different. It's a way to distinguish myself from all the avatars that are perfect renditions of what bodies should be."[L] Similarly, Michele Gardner's avatar identity constantly shifts from a blonde "bombshell" skin to dark brunette and vice versa, acting as a metaphor for her dichotomous image of female beauty and racially ambivalent self-image (she is part Caucasian and part Black).[M]

FIGURE 9.2 *Online/offline identities: stills from Second Bodies of documentary subject Annette Smith in real life (left), and her avatar (right) in Second Life*

The filmmaker can also exploit the aesthetic and abstract properties of VR to convey complex themes related to problematic self-image, otherness, and abjection. Slavoj Žižek (1997, 138) describes the user identity/psyche in virtual space:

> I can follow the escapist logic and simply act out my RL difficulties in VR, or I can use VR to become aware of the inconsistency and multiplicity of the components of my subjective identifications and work them through. In this second case, the interface screen functions in a way homologous to the psychoanalyst: the suspension of the symbolic rules which regulate my RL activity enables me to stage-externalize my repressed content which I am otherwise unable to confront.

In *Second Bodies*, as two avatars reflect on their history with mental illness, one of them commits suicide inworld by jumping off a lone tower (Figure 9.3).[N] I modified in post-production the footage of the Second Life sim in which this scene occurs by de-saturating its original colors in order to reference a "Bergman-esque" world of inner despair and turmoil. The image that follows is the avatar rising "from the dead," unharmed. For the intertitle preceding this sequence, I chose Baudrillard's statement: "technology becomes a marvelous adventure … we play with death in technology" (2008, 41). This scene is representative of the visual ways in which a machinima filmmaker can use VR space as a framework to philosophically explore psychological processes or to reflect upon one's deepest insecurities and self-stigmatizing ideas. The act of revealing intimate aspects of one's life can be choreographed in VR for a profound statement on suffering and pain. The abstract, poetic, surreal, and metaphorical aspects of animated shapes, graphics, bodies, and fantasy worlds—all the compelling imagery available in Second Life—can thus be exploited in the stylistic and visual treatment of point-of-view storytelling. Elaborate sets, costumes, and/or computer graphic animation are not needed in machinima; instead, Second Life and other VR worlds are emotional landscapes convenient and "ready-made" for cinematic exploration.

FIGURE 9.3 *Still images from* Second Bodies *of filmmaker's avatar committing virtual suicide in Second Life.*

The aesthetics of VR can also be striking due to the quirks of the gaming engine. Second Life offers phantasmagorical and whimsical geographies that can inspire a filmmaker with their bold and scintillating colors, graphics, and textures embodied in the primitivism of the movements and skins of the avatar. Second Life can thus be an inexplicable world where the humorous and the poetic tragicomically mix in the stilted and pre-programmed basic expressions of the avatar, where its crudely animated forms may reach a transcendent beauty when given weight in a narrative. Some viewers may find that Second Life or other VR environments are the antithesis of aesthetic expression, yet others may discover that these worlds are strangely beautiful and poetically resonant. It is telling that Lev Manovich (2001) comments on communication in virtual reality as one "without language or any other symbols": "locked in virtual reality caves, with language taken away, we will communicate through gestures, body movements, and grimaces, like our primitive ancestors" (73). As an avatar blows a kiss, performs *tai chi* in a ball gown, or makes love, the recording of these actions can provide an aesthetic and poetic experience for the viewer. For example, when an avatar's flesh disappears or blends into the body of another avatar in virtual love-making, the virtual camera recording this act reveals a poetic poignancy inherent in two real-life users making virtual love; the mingling of virtual flesh is weirdly spiritual and alien in its visual representation.

In *Second Bodies*, we look at images of the avatar of Michele Gardner, a woman with a disability, conducting a brief virtual affair with her real-life ex-boyfriend (Figure 9.4).[o] The viewer is painfully aware that somewhere behind the virtual flesh and two computer screens lie the gazes of real-life users engaging in this supremely bitter-sweet act. Michele's voice-over narration reveals that she had never been able to enjoy authentic intimacy with her ex-boyfriend in real life, and that her most intimate moments with him had taken place in Second Life. Ultimately, love-making in virtual worlds is contingent upon the aesthetic experience of visual stimuli only, devoid of tactile sensation and the warmth and intimacy of the human body. Michele's experience defines this unsatisfying dimension of virtual love—its very nature frustrates the real-life equivalent in the imagination of the user while simultaneously upholding the illusion of the virtual as real. As Baudrillard (1994) states, "simulation threatens the difference between the 'true' and the 'false', the 'real' and the 'imaginary'" (3). This idea can be equally applied to *Second Bodies* as a means of questioning and exploring these facets of human perception through the aesthetics of "the virtual" and its powerful visual subtext.

FIGURE 9.4 *Virtual love-making as an aesthetic-poetic statement: stills of Michele's avatar in Second Bodies romancing her real-life ex-boyfriend's avatar in Second Life.*

Another important element of intra-frame aesthetics in Second Life is that every sim or region has its own color scheme and virtual production design that can replicate any "film genre," including science fiction and fantasy. For example, the Inspire Space Park sim is other-worldly with its dazzling, candy-colored planets and meteor showers. The color palette is bold and vivid (see opening sequence in *Second Bodies*),[P] delighting the imagination. In the Orange Island 3 sim,[Q] the virtual design consists of a techno-futuristic, bright red and grey decor with flashing red lights (including grating audio and fire siren sounds). Other Second Life locales offer surreal, Dali-esque worlds where virtual and interactive art installations are embedded in the surroundings, such as that used for the Pencil Factory sim in *Second Bodies*.[R]

In terms of camera aesthetics and techniques, Second Life is an equally opportune environment for visual lyricism and playfulness. The possibilities for aesthetic experimentation and personalized filmmaking in machinima are high and augment the filmmaker's pleasure during the artistic process. The choreography of shots depends on how many subjects/actors one is filming inworld, and how well the filmmaker has adapted to the VR environment. VR affords a much smoother plane for artistic expression if one accepts the growing pains of learning to operate within it and faces the technical quirks of shooting with capture screen software,[5] such as deciding on image resolution rates and video compression formats or codecs.[6] From a technical standpoint, creating machinima can be complicated due to capture screen software idiosyncrasies, frame rate issues between capture screen technology and editing software, and resolution rates required to achieve a high-quality image. Machinima movie files can also cause various post-production work flow problems because they take up excessive storage and may slow down the editing process. Irrespective of these difficulties, intra-frame qualities in Second Life can be visually stunning with practice operating the virtual camera. Bird's-eye-view angles, 360-degree camera movements, and other sophisticated camera techniques are easily accomplished once the filmmaker has acquired sufficient practice with mouse,

keyboard, and/or joystick operations which supplant the tripod, crane, and dolly of a real-life camera. For instance, in the Orange Island 3 scene of *Second Bodies*, the "virtual camera" smoothly swivels 360 degrees around the filmmaker's avatar reclining in a futuristic pod.[S] The revolving camera illustrates the filmmaker's self-reflexive narration, implying the dream-like, hypnotic, and performative aspects of Second Life as the narrator comments: "I can be my own science-fiction character in my own self-directed movie." In the physical world, this type of camera movement circling around a subject would not have been as easily achieved and would have required some form of rig and special camera set-up.

Another example of the aesthetic "voice" of the virtual camera in *Second Bodies* is the depression/suicide scene where virtual camera and editing techniques create a match cut between a "zoom-out" of Annette Smith in real life to a "dolly-out" in Second Life, where the camera tracks out to reveal the filmmaker's avatar standing in the tower of a deserted cobblestone house, enclosed by leafless trees and broken branches.[T] This match cut between real life and Second Life visually conveys the similar dynamics of melancholia shared and experienced by Annette Smith and the filmmaker Sandra Danilovic. Consequently, these scenes are representative of the aesthetic possibilities of complicated camera movement and shot composition in simulated worlds, where overhead shots and gliding tracking shots are easily accomplished through joystick/keyboard operation. Intricate rigs and camera set-ups that are typical of the real-life filmmaking process are as invisible and obsolete in Second Life as the camera body itself. Lighting set-ups are also irrelevant; the Second Life user can instantaneously switch the time of day from sunrise to midday, sunset or night-time by simply customizing the world's environment and time configurations.

Conclusion

In summary: the philosophical, aesthetic, and ethical dimensions of machinima are multi-faceted and complex, but they also create new and exciting possibilities for filmmaking practice and theoretical discourse. Gaming worlds and VR are fast becoming important expressions of online engagement due to the immersive and interactive aspects of participation in these spheres. Making machinima documentaries or recording events within these virtual universes is equally exciting as the delineation between real and virtual fades and boundaries blur. The complexities of virtual identities and anonymous avatars can obscure the process of authentic representation, but these issues can also provide rich material for the exploration of the intersections

between art, film, society, culture, human consciousness, new media, and gaming. The lack of differentiation between real and virtual also applies to that between professional and amateur identities. In the new media landscape, amateur reporters and machinimators can become legitimate documentarians empowered by subjective forms of storytelling that defy traditional journalistic practice, particularly with wide dissemination of their work across the Web. As machinima practitioners, we *are* the virtual camera, a completely hidden device of surveillance and exposé embedded in the infrastructure of privacy invasion infringing upon virtual and real-life identities and narratives. The aesthetics of machinima filmmaking also confound traditional concepts of visual filmic expression because they present novel and unusual ways of looking at animated bodies, identities, stories, and worlds within a documentary context.

Notes

1 Winner of Best Documentary, New Media Film Festival, San Francisco, 2010, and the Gordon F. Keeble Award, Ryerson University, 2009.

2 Real-time voice streaming is available in Second Life, but can be hindered by various streaming irregularities, resulting in signal distortions and breaks. Further, SL avatars must enable voice chat on their ends, although the local chat option also allows SL avatars to communicate with others via voice in a given sim (unless they choose to privately instant message each other).

3 First-person shooter (FPS) in the context of gaming refers to "the focus on the first person perspective … through the character's eyes" (Elias 2009, 9). In Second Life, this mode is switched on with Mouselook.

4 In this mode, the shooter's avatar is in the field of view.

5 *Second Bodies* machinima footage was recorded using the *iShowU HD* (2008) capture screen software.

6 *Second Bodies* combined the 1280 x 720 high-definition image resolution rate with Apple Inc.'s *ProRes 422 HQ* codec for capturing the machinima footage.

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10

Call it a vision quest

Machinima in a First Nations context

Elizabeth LaPensée and
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Prologue

To begin: a story. In the fall of 2008, as Mohawk artist Skawennati was leading her team through their first machinima production, they started running out of building material. In the environment they were using, Second Life, the basic building material is called a prim, and one only gets a set number of prims per square footage of virtual land that one owns. What struck the team as odd was that they seemed to be running out of prims well short of the limit dictated by the size of the island they owned in Second Life.

But e-mails with Second Life's technical support team confirmed that they had been assigned the correct number of prims, and that that number should have been more than enough for the building they were constructing.

There the mystery remained until the day team member Bea Parsons strapped a new, extra-powerful jetpack onto her avatar, ignited the boosters, and headed up. She wanted to see just how high one could go in Second Life. She had gone about twice as high as she had ever done before when she made a startling discovery: way, way, way up in the clouds above Skawennati's island was an entire city, floating in the sky. It was beautiful and exquisitely built by craftsmen of far higher ability than Skawennati's quite capable crew. Aha, thought Parsons, that's where all our prims were going!

In the physical space of the lab, Parsons's excited shout drew everybody's attention. The rest of the crew geared up in Second Life and flew into the sky. Up there, they explored the buildings, confirming the high quality of the model building and assemblage. After a while, they encountered five other avatars inside a room, dressed in outrageous skins and clothing. Parsons immediately dubbed them "The Prim Pirates." The Prim Pirates did not take kindly to being told they were squatting on someone else's land until Skawennati, appearing as her Hunter avatar, proved that she also controlled the account under whose name the land was registered. After a long discussion, in which Skawennati alternately tried to convince them to come down and help build sets for her machinima series and threatened their sky city with destruction, the Prim Pirates simply teleported out of the space.

Skawennati's crew never saw them again. But they also did not forget that, on top of the existing irony of Indians buying virtual land and then colonizing it, there was now an additional irony of having to enclose that land to protect it from counter-colonization by a mysterious, strangely dressed, and somewhat belligerent group of technological adepts.

Introduction

Machinima provides First Nations people with a powerful set of tools with which to craft stories about themselves and their communities. It shares characteristics with many older media, principally cinema (Piggott 2011), but in its unique combination of opportunities for creative remediation, inexpensive production, and worldwide dissemination, we also see machinima as a medium through which First Nations people can take control of representations within the popular, mass media landscape.

As Skawennati's colleagues in the Aboriginal Territories in Cyberspace research network (AbTeC), we have observed the development of the

TimeTraveller™ project[A] since its inception in 2009. We argue that *TimeTraveller™,* as well as several other projects we will discuss, exemplifies the potential of machinima as a productive medium for First Nations creative and cultural expression. In this chapter, we will look at how new media practices, such as those embodied in *TimeTraveller™*, can be seen in the context of survivance—survival by resistance—and discuss how machinima in particular is a medium well suited to the remediation and narratives of resistance in First Nations culture. In the process, we will also consider the relationship between survivance and machinima's production processes, community of practice, and potential for extensive dissemination.

First Nations new media creation: tradition and technology

Sitting in the middle of concentric circles, Cree new media artist Archer Pechawis hits his hidebound hand drum and ignites an electric current through a wire activating a MIDI audio sample. As he sings and drums, videotaped footage shows Kutenai elder Bill Lightbown, Coast Salish elder Harriet Nahanee, and Pechawis's grandfather, Thomas Pechawis, speaking about what constitutes tradition. This performance, called *Memory*, (1997),[B] asks a question of central importance to First Nations new media: What is "traditional," and can our use of sophisticated technology be considered traditional?

The history of media technologies is one of Western instrumentalization that has sought to co-opt indigenous (including First Nations) cultures, decimate our languages, and deny self-representation (Lewis and Fragnito 2005).[C] Yet when put into our hands, as has happened over the past few decades, these technologies create opportunities that can benefit our communities by preserving our cultures, increasing the use of our languages, and promoting a self-determined image to a worldwide audience. The simultaneity of opportunities and dangers has led media cultural critics such as Steve Loft to think about Western technology in terms of the *shape shifter*—"neither inherently benign nor malevolent, but always acting and active, changing, transformative, giving effect to and affecting the world" (Loft 2005, 94).

Indigenous traditions survive because of their ability to change and transform in response to developments such as those wrought by communications technology. The occupation, transformation, appropriation, and re-invention of new media by indigenous artists exemplify the adaptability of Indigenous traditions (Hopkins 2006).[D] Forms of indigenous new media

art are as varied as the artists and their works, including but not limited to websites, virtual performances, multi-media installations, and games or game mods (modifications of commercial videogames). The technologies used may themselves not be traditional, but the ways in which they are used, re-purposed, and reshaped can be in the service of traditional or tradition-honoring practices.

A further aspect of traditional indigenous art we may see reflected in the practice of indigenous new media artists is a concern with working in a way that is of benefit to future generations (Taunton 2010).[E] Our AbTeC research network[F] engages indigenous youth in learning about advanced videogame design, modeling, animation, and programming technology through the Skins workshops (Lameman and Lewis 2011).[G] The workshops have resulted in the first-person game *Otsi!: Rise of the Kanien'kehá:ka Legends* (2009)[H] and the third-person game *The Adventure of Skahion:ati: Legend of the Stone Giants* (2011), both of which adapt traditional Mohawk stories to game environments. Such projects connect creative expression in new media to tradition in a contemporary context that conveys our identities and concerns in the present (Claxton 2005).

Survivance

In this context of technology intertwining with tradition, we propose that indigenous new media is an area in which it is fruitful to think through issues related to "survivance," a concept popularized by Anishinaabe writer and scholar Gerald Vizenor. Vizenor describes survivance as "an active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy, and victimry" (1993, vii). For our current purposes, we focus on the relationships among survivance, victimry, and story. Survivance is not merely "surviving," in the sense of not being consumed or killed by colonizing oppression. Survivance is fighting back. However, in Vizenor's view, resistance should not take the form of violence as it then results in victimry, or a conceptualization of the indigenous experience and worldview primarily in terms of having been victimized. His ideological commitment is to fight against views that relegate indigenous peoples to *having been*, as if indigenous peoples and culture no longer exist except in museums and archives. An attitude of survivance addresses the self-limitations of victimry by reinforcing the existence of living indigenous culture in contemporary society. Furthermore, in place of victimry—and its violent consequences—as a response to colonization,

Vizenor proposes stories, specifically stories that act as "word arrows," illustrating resistance through self-determined representations acting as vectors for recovering tradition and carrying it into the future as a living, evolving presence in the world.

A successful survivance strategy thus depends on integrating indigenous knowledge and ways of being into the process of making and telling stories, and on portraying self-determined representations to the world (Taunton 2010). Given that indigenous stories are continually changing, at once both individualized and communal, original and replicated, authored and authorless (King 2008), interactive new media technologies make for an apt fit as a means of story production and dissemination (Claxton 2005). The affordances of media such as experimental film, animation, and videogames provide a means whereby indigenous stories and art can embrace change as new forms while maintaining self-determined representations (L'opez 2008). Audiences may approach indigenous new media works from the perspective of being interested in indigenous expression, or they may come upon works through their connection to and interest in the medium that was used to create the work. Either way, having indigenous creators shaping those representations as producers, rather than being subject to others' interpretations, challenges the notion that indigenous art is a static relic of the past.

Survivance can also work in new media by way of philosophical integration. In her far-sighted essay "Aboriginal Narratives in Cyberspace," Cree filmmaker Loretta Todd (1996) articulates the teleological challenge cyberspace poses for non-Western cultures, given that it was created to satisfy the Western need for expansion, control, and domination. She encourages Indigenous artists to integrate their own philosophy with the design of new media so as to infiltrate indigenous concepts of epistemology, corporeality, and transformation into the structure of cyberspace. Such an approach echoes Vizenor's interest in the adaptability, contemporariness, and critical stance found in survivance.

Fifteen years after Todd's observations, we can see numerous examples of new media works developing to combine her ideas on infiltration with survivance. For example, Skawennati's *CyberPowWow* (1996)[I]—a virtual space that uses the graphical chat program *The Palace* (1995)[J] for participants to explore new identities while reading, viewing, and discussing one another's writings and art—connects virtual communities to First Nations communities in the "real" world. Like Pechawis's reappropriation of memories of colonization in order to respond to that history, Cree musician and new media performance artist Cheryl L'Hirondelle's *NDN Spam* (2011)[K] is a collaborative website with videos and an interactive cookbook that reappropriates spam, a processed meat that was government-issued to impoverished reservations. In the

Alternate Reality Game *Techno Medicine Wheel* (2008),[L] in which an interactive narrative weaves the real world with new media, online players engage with traditional Squamish knowledge about medicinal plants presented as visuals and text. Players are challenged to locate and identify plants and interact with Squamish new media artist Cease Wyss at community gardens within the urban growth boundaries of Vancouver, British Columbia, thus merging cyberspace with physical space.

Machinima

The digital medium that interests us most here is machinima. Machinima is typically defined as a production technique rather than an aesthetic product. It uses real-time engines from videogames and virtual worlds to create cinematic computer animations. The artist then takes the output from these processes and creates the artwork, which may be as varied as linear video clips, recorded game sessions, or live performances (Nitsche 2005).

In relation to this process-intensive definition, Erik Champion (2009)[M] posits that machinima is primarily procedural art, drawing from philosopher Stephen Davies (1991), who argues that definitions of art are often functional *or* procedural. Functionalists emphasize that works of art must perform functions such as provide an aesthetic experience, whereas proceduralists assert that certain procedures must be used to create art. Machinima, as an emerging form that is developing along with the evolution of digital games technology, tends to emphasize technique (Berkeley 2006).[N] In turn, this means that the locus of aesthetic and conceptual exploration occurs most often in the production process. Furthermore, machinima production involves re-purposing code, graphics, and audio from an existing game or virtual world engine to create original works. Such a deconstructive mode in the production process of machinima lends itself well to question how Western technologies are structured, how they might be disassembled for cultural critique, and how they might be reshaped to better serve indigenous creators (Claxton 2005).

More broadly, machinima's foundation on worlds and engines used for mass-market production provides indigenous new media artists with vast opportunities to subvert depictions of indigenous peoples found in games played by hundreds of thousands of people. For example, *Soniyáw* (2008), a *World of Warcraft* (1994) machinima by Myron Lameman, plays on the stereotypes of the Tauren race (Figure 10.1). *World of Warcraft* is a Massively Multiplayer Online Role-playing Game that co-opts several cultures for its races (Langer 2008), including a generalization of indigenous cultures into

the pan-Indian Tauren, a cow-like shamanistic race. In comparison, *Soniyáw* contributes to survivance through its use of names, story, and aesthetic style. Like the title *Soniyáw*, which stands for "money" in Cree, the player characters used as actors have Cree names instead of names from the built-in Tauren name randomizer that have no connection to indigenous languages. The story resists hack and slash or game lore-related narratives typical of *World of Warcraft* machinima by focusing on a main character who struggles so much with combat that he seeks alternative means of supporting himself by using traditional Cree gambling activities like the "hand game" to make money. In its use of design, language, setting, and action, *Soniyáw* simultaneously subverts in-game pan-Indian stereotypes as well as out-of-game stereotypes about North American indigenous culture and gambling.

FIGURE 10.1 *Soniyáw the Tauren in Thunder Bluff city*

As Tracy Harwood (2011) observes, the emerging generation of machinima makers are not necessarily gamers working from the inside out (in which the game engine is chosen by fans who wants to express their play), but also include artists who are working from the outside in (in which the game engine is seen as a tool independent of game culture) (cf. Nitsche 2007).[9] *Soniyáw* was created "inside out" from the perspective of a First Nations gamer interested in survivance through machinima in reaction to *World of Warcraft*'s stereotypes of indigenous cultures. Like Lameman, artists are looking for novel means to realize individual expression, and in that respect see machinima first and foremost as a tool for creating artwork. Skawennati's *TimeTraveller™* is another example of such a machinima work created by

a First Nations artist to explore a number of issues related to indigenous people, tradition, technology, and the future of our communities, to which we will now turn to examine in greater detail.

Machinima as First Nations practice

When Skawennati discovered Second Life machinima, she knew she had finally found the medium for making *TimeTraveller™*. Conceptually, *TimeTraveller™* originated as a cinematic companion piece to *Imagining Indians in the 25th Century* (2001), an interactive website[P] based on paper doll games and journaling to play with futuristic First Nations representations. Skawennati had imagined *TimeTraveller™* with an aesthetic similar to that of the first-person shooter (FPS) game genre, and Second Life not only worked in the first-person point of view, but natively supported the physics required for the flying, teleporting, time-traveling, and jetpack-wearing characters in the story.

Indeed, *TimeTraveller™* holds a cyberpunk-inflected narrative: it tells the story of Hunter, a young Mohawk man of the twenty-second century who looks to his past to imagine what his future will be. Frustrated by the state of the world in 2121, Hunter embarks on a Vision Quest, but unlike his ancestors he does not venture into the land alone. Instead, he uses TimeTraveller, a 3D virtual reality device that allows users to "travel" through time to visit famous people, places, and events. Along the way, Karahkwenhawi—a Mohawk woman from our present—finds a duplicate of the device and goes on a Vision Quest of her own into the future. The primary storytelling mechanism of *TimeTraveller™* is a Second Life machinima series composed of ten episodes ranging between five to seven minutes each. Every episode integrates First Nations cultural imagery (historical, contemporary, and futuristic) with imagery of high-tech equipment and processes. In the following sections, we discuss how *TimeTraveller™* embodies First Nations survivance by employing machinima as a venue for telling stories that reflect on our past and present as well as imagine our future.

Remediation

Machinima's essential definition as a remediative practice offers opportunities for First Nations new media artists to engage in critical re-imagining. Broadly put, remediation is the "representation of one medium in another" (Bolter and Grusin 2000), and machinima remediates content from the game engine in use, including characters, levels, and sounds (Nitsche 2005).

Game-dependent camera effects, for example, influence the structural form of a machinima work. For those who have not played the game, the work stands alone because it is difficult to distinguish game elements from new elements created by the artist. However, those familiar with the game will have a deeper understanding of the artist's use of the game engine, causing them to question what they have experienced previously as players (Champion 2009).

While *TimeTraveller™* itself is not remediated directly from elements of its engine of Second Life, many of its references are re-appropriated from literature, media on the internet, and historical accounts. Such re-appropriation has a long history as a form of critique and resistance, from the collagists of the early-century avant-garde (Drucker 1994) to the mid-late-century "found footage filmmakers" (Horwatt 2008).[Q] The new media work *Memory v2* (2010)—an interactive drum that controls video play-back of the *Memory* performance discussed at the beginning of this chapter—is an example of such an approach within First Nations new media practice with its integration of found footage from interviews with elders.

In *TimeTraveller™*, images from the internet are re-purposed as textures for specific content, such as Google and Coca-Cola online advertisements in the flyover scene in Episode 01,[R] or the Mohawk flag in Episode 03.[S] Remediation is also at work in entire settings, which range from futuristic to contemporary to historical as Hunter "travels" through time. In Episode 01, we are introduced to Hunter's life in 2121, reminiscent of Neal Stephenson's (1992) cyberpunk novel *Snow Crash*, filled with slick skyscrapers, electric blue lights, and punk fashion. Hunter flies with his jetpack alongside a barrage of billboard advertising, pointing to companies like Google and McDonald's that remain prevalent in the fictional 2121 world. In Episode 03, we follow Hunter on his journey to learn Mohawk teachings and values about the Warrior Society and Tree of Peace in the context of the effects of mainstream media on Mohawk representation. In that episode, we also witness a machinima remediation of a historical television news report that was biased against Mohawk people during the Mohawk Crisis of 1990. Each episode thus reifies First Nations presence throughout time, using the remediation of media as a means of resistance against absence.

Resistance

Machinima lends itself well to strategies of resistance and subversion, since as it is based on radically modifying existing game engines or virtual

environments towards some other purpose. Machinima-makers define their practice as one where conventional gameplay is deprecated in favor of *playing with* the structure of the game rather than playing the game itself (Mitchell and Clarke 2003).[7] Simply by adapting gameplay to the cinematic form, machinima resists the path the game producers intend for the players.

Unlike games, Second Life does not have a single, unitary narrative or operational thread that can be subverted (Pinchbeck and Gras 2011). Second Life differs from commercial games in its lack of goal-orientation, relying instead mostly on the social interaction of users as well as an economy of user-generated content to serve as the reasons why people use it. User-generated content tends to be inspired by the individual contexts of users as opposed to a pre-defined narrative generated by the system (ibid.). The lack of a game narrative in Second Life thus makes it easier for *TimeTraveller™* to operate in a context that is different from most of machinima's self-reflexive invocation of game culture, creating its own narrative context that looks to First Nations culture and science fiction as its main reference points.

Such creative contexts and references may be seen in a number of ways. First, Skawennati develops a rich set of First Nations characters in Second Life, an act which we argue constitutes a powerful contribution to self-determination in cyberspace (Figure 10.2). When Skawennati first joined Second Life and created her Hunter avatar, skin tones were limited. She had to select "Latino" skin for Hunter because First Nations tones were not available. She was unable to find a traditional Mohawk hairstyle, so she

FIGURE 10.2 *Hunter (second from left in foreground) and Dakota men raise arms together*

selected a dreadhawk (which, in the non-linear way that creative decisions often evolve over time, has been kept because she sees it as reinforcing Hunter's cyberpunk image). Such lack of options is a common issue across all videogames and virtual worlds where one finds few indigenous characters (Lameman and Lewis 2011). Even games known for their highly customizable characters like *Fallout 3* (2008) often neglect to include skin tone and hair options that would support Indigenous representation.

Second, Skawennati customizes numerous objects in *TimeTraveller™*, a significant vector through which First Nations survivance strategies are enacted. Customization in machinima may involve making assets such as animations, textures, objects, and sounds. This technical production usually requires additional graphics and sound software that has both commercial and open source options, in the process modifying in-game characters, environments, props, music, and effects (Cameron and Carroll 2009). Such processes provide more opportunities for machinima makers to express themselves individually, since the assets can be interpreted independently from the game context. Second Life machinima in particular tends to involve an extensive amount of modification owing to the user-generated nature of the virtual world. One of the customized objects in *TimeTraveller™* is the digital version of sacred objects. In Episode 03, a smudge shell and bundle of sage are used for smudging in a ceremony. A wampum belt, traditionally woven with beads, sinew, and leather and used as a mnemonic device to keep account of treaties and contracts, also makes an appearance. The *TimeTraveller™* team also purchased hairstyle assets to be modified for use on their avatars to complement the traditional braided male hairstyles they made themselves. The use of such objects thus serves as examples that First Nations culture can be effectively transposed into new forms.

Other customized objects include clothing. Finding culturally appropriate clothing for characters proved to be a challenge, since most of the depictions of First Nations culture in Second Life stem from romanticized pan-Indian stereotypes. The team found some user-generated content that was appropriate for Episode 02,[U] since it takes place in the 1800s, including a bow and arrows, moccasins, raccoon hides, a pouch, a necklace, turquoise belt buckles, and feathered rifles. However, creating accurate dressing for the scenes from a contemporary time setting, such as in the first half of Episode 04,[V] was necessary, since exhaustive searches for these assets proved unsuccessful. As a result, the team created much of the clothing for the characters, such as ribbon shirts, fancy dresses, and jingle dresses (Figure 10.3).

Aside from historically accurate clothing, Skawennati and her team also created contemporary clothing, such as a collection of T-shirts featuring First Nations symbols. For example, in Episode 01, Hunter wears an Iroquois

FIGURE 10.3 *Jingle dancers assembled at a futuristic powwow in Episode 04*

Confederacy (Haudenosaunee) T-shirt to proclaim his Mohawk heritage and to indicate his rejection of Canada's jurisdiction over him, his people, and their territory. The production also created futuristic clothing, such as the *haute couture* "Ovoid" gowns in Episode 04 worn by the powwow dancers of the future. These gowns not only comment on how First Nations people will be participating in future culture but also suggest that West Coast culture, which did not historically participate in powwows, will come to partake in such pan-First Nations events (Figure 10.4).

FIGURE 10.4 *An "Ovoid" gown from the futuristic powwow in Episode 04*

The ways in which avatars perform their actions were also customized. The team made animations for full body movements, hand movements, head gestures, and touch that were based on First Nation cultures. At the futuristic powwow in Episode 04, avatars drum, sing, and jingle dance. Hand movements were made for a ceremony involving the smudge shell and bundle of sage in Episode 03 (Figure 10.5). The integration of the ceremony in Episode 03 echoes the merging of sacred practices and protocol with new media, as discussed by Claxton (2005). Head gestures were a particularly interesting contribution to the representation of First Nations communication. To avoid the exaggerated head gestures that are the norm in Second Life and which they felt were too Western, the team made a traditional Mohawk gesture of pointing with the chin. Touch animations such as kisses on the cheek and back-patting were made to show character relationships. Each of these animations thus manifests First Nations expression in a virtual context to create a distinct world in which to tell the *TimeTraveller™* story.

FIGURE 10.5 *The Lance Thomas avatar performing a smudging ceremony*

Finally, resistance is also seen in survivance showing the adaptability of First Nations tradition. In *TimeTraveller™*, First Nations characters are frequently represented as technological experts. The characters are active participants in virtual spaces rather than victims of the digital divide (Norris 2001), a technological separation that still occurs for many First Nations reserves that do not have access to the internet. In Episode 01, Hunter flies around using his jetpack in a city filled with sky-high shiny buildings. The *TimeTraveller™* glasses worn by Hunter and later also by Karahkwenhawi in Episode 04 show futuristic advanced

technologies in First Nations' hands. Karahkwenhawi, who lives in our present time, also uses her iPhone to take footage of the Blessed Kateri Tekakwitha statue at the Saint Francis-Xavier Mission.

Production process

The production process of machinima is also similar to indigenous traditions of learning. Skawennati and her team faced initial challenges due to their lack of familiarity with shooting in Second Life. Through experimentation and practice over a number of months, as well as relying on the existing online resources provided by the Second Life machinima community, the team mastered the necessary skills to the point where they could focus their efforts on writing the narrative and developing custom content reinforcing First Nations representation. Their process of learning through sharing knowledge and taking action by doing may be seen as an example of experiential learning, an approach that has also been described as central to indigenous tradition (Deloria and Salisbury 2004).

Machinima's affordance of flexibility during the production process is also akin to indigenous storytelling methods. Thomas King observes how indigenous storytelling methods prioritize contextual adaptability, taking into account temporal contexts, physical environments, communal characteristics, and the movement of the story itself (King 2008). Machinima is a medium in which taking such an approach can work quite well, as it supports interchangeable environments, audience interaction in the case of Second Life, and rapid shooting and re-shooting. For the *TimeTraveller™* team, it was particularly helpful to be able to quickly re-shoot scenes when avatars need to be re-positioned or additional dialogue is added. The immediate flexibility in machinima makes it possible to follow a script but also to improvise and adapt similar to methods of indigenous storytelling.

Community of practice

Machinima exists within a community of practice—"a specific group with a local culture, operating through shared practices, linked to each other through a shared repertoire of resources" (Cameron and Carroll 2009). Engine-specific knowledge is abundant in online tutorials and, in some cases, printed publications. Information to support modding efforts exists in the form of tutorials as well as archives of user-generated content. Active support is readily available

through discussion boards and blogs. Whenever Skawennati and her team ran into technical issues, they referred to the Second Life machinima community's numerous resources and interactive support.[W] This open sharing of knowledge in machinima's community of practice aligns with First Nations practices of survivance. Seen within the context of traditional First Nations learning emphasizing self-directed and communal practices (Grande 2004), the team's participation and engagement in the Second Life community of practice may be seen as an example of First Nations pedagogy becoming reified in a technological space.

The community of practice also influences how machinima is experienced. Most machinima involves building, shooting, editing, distributing, and receiving feedback from the community, before either modifying the machinima work or taking the feedback into consideration for a future work. In Second Life, machinima viewing is a social experience among maker and audience that can occur within the system while it is being produced. The audience can be involved in the production process and re-shoots without further rendering required (Pinchbeck and Gras 2011). In this unique context, dissemination is layered throughout the production process and facilitates a communal experience between maker and audience. *TimeTraveller™*, while remaining open to audiences who have not yet learned about First Nations history, relies on the audience's active participation in First Nations perspectives and knowledge. For example, Skawennati's version of the incident that incited the Dakota hanging in Episode 02 is not historically accounted for, but is, rather, her First Nations perspective on reports whose accuracy the audience must determine. The audience is also invited to interact with digital representations of sites of colonization (such as the Dakota hanging) or resistance (such as the Oka Crisis) as Second Life avatars moving through and viewing select living sets at AbTeC Island.[X]

Dissemination

TimeTraveller™ has been distributed through many of the methods available to machinima works: online, offline, and in mixed-reality contexts (meaning online and offline merging simultaneously or interlacing at different points in time). Each method affords a unique experience for the *TimeTraveller™* audience, a diverse community consisting of indigenous and non-indigenous youth, artists, history buffs, and Second Life enthusiasts.

TimeTraveller™ is unusual in that it is a machinima series with a companion Alternate Reality Game. The website (http://www.timetravellertm.com/index.

html),[Y] which appears in our present time by means of "a rift in space-time," promotes the twenty-second century *TimeTraveller™* product, namely sunglasses that provide "a fully-immersive experience that feels like one has traveled in time" (*TimeTraveller™* (2009)). The machinima series, then, is presented as a reality TV series from the future which follows Hunter on his adventures. The website is the access point to the episodes, as well as to information about how to buy *TimeTraveller™* technology and related merchandise.

To this extent, the *TimeTraveller™* Alternate Reality Game, embedded in both a fictional context and reality, may be read as an example of King's view (2008) that indigenous stories are *truth* rather than myth in that it contributes a First Nations understanding of historical events. The machinima episodes are also hosted online, in our contemporary time-line, on YouTube and Vimeo by Karahkwenhawi as she "discovers" them. Karahkwenhawi also has a Facebook profile[Z] through which she tells her story of discovery via status updates and links. The audience can interact with Karahkwenhawi through her Facebook page and help her on her search for Hunter.

The episodes are also posted on a Vimeo account that belongs to Obx Labs (the host of AbTeC at Concordia University).[AA] These links are usually accessed for professional development, such as selection at galleries or festivals, or for presentations about the project. In the episodes' future time-line, the maker of the *TimeTraveller™* device is a First Nations-owned virtual technology company called Aboriginal Territories in Cyberspace. In our contemporary time-line, Aboriginal Territories in Cyberspace is a research network of indigenous and non-indigenous researchers, artists, and technologists who explore indigenous self-determination in cyberspace. Imagining the research network as surviving into the future and mutating into an inventor of advanced technology is an assertion not only about the technical capabilities of indigenous people in the present, but also of the growth of those capabilities in the future.

The *TimeTraveller™* episodes are also shown in the context of festivals and events, particularly within the machinima community, such as the imagineNATIVE Film + Media Arts Festival in 2009,[BB] where it won the New Media award. The Concordia University Fine Arts Gallery also showed *TimeTraveller™* episodes at indoor and outdoor screenings; in the latter, the audience included people who were unfamiliar with machinima and/or First Nations new media.

TimeTraveller™ has also been shown "live" with Skawennati entering into Second Life as her avatar to present the project (Fragnito 2010). The *TimeTraveller™* episodes have been screened inworld in Second Life on the Aboriginal Territories in Cyberspace Island while simultaneously being

played live at real-world events hosted by AbTeC. For example, the release of Episode 04 occurred both in real life at a public event as well as in Second Life on the jumbo screen at the powwow stadium that had been created for the episode and left on the set. A local audience watched the machinima, while anyone with a Second Life account from anywhere in the world was able to share the experience by watching the same machinima episode inworld. These modes of distribution reinforce the trait of communal interaction in indigenous storytelling (King 2008) and facilitate the creation of a communal experience for the audience in ways that reflect King's (2008) and Vizenor's (2009) descriptions of indigenous approaches to storytelling. The audience is invited not only to interpret the story, but also to participate in the telling of it. In this way, machinima thus gives First Nations new media artists potential tools to expose new audiences in wide-ranging locations using communal indigenous methods.

Conclusion

TimeTraveller™'s production is still ongoing. To date, four episodes of the machinima series are complete and another six are planned. Each additional episode includes custom content for complex sets and several characters that highlight new indigenous representations in the series. In Episode 05, Karahkwenhawi finds herself at the deathbed of the Blessed Kateri Tekakwitha. Episode 06 involves re-creating part of Alcatraz Island in 1969 and Episode 07 includes a portion of the thriving metropolis of Tenochtitlan in 1490, both of which required in-person visits to historical locations to ensure proper representation. Episodes 08 through 10 explore visions of a First Nations future that has been shaped through decades of self-determined growth.

In conclusion, *TimeTraveller™* utilizes the idiomatic qualities of episodic storytelling, custom content, and remediation in machinima to resist pan-Indian and neo-luddite stereotypes of First Nations peoples. The *TimeTraveller™* characters and stories exist within the machinima, but also within the Second Life world, and even in our present reality through the Alternate Reality Game. The project's production process offers an example to emerging First Nations new media artists on how to combine the past, the present, and the (imagined) future in a way that can be read as paradigmatic of survivance strategies for asserting indigenous presence. The dissemination strategies employed by the project suggest fruitful approaches to reaching various audiences made up of indigenous and non-indigenous communities with

differing interests. Finally, the richness of the narrative, the way in which it functions as a forceful conceptual and aesthetic critique of both indigenous and non-indigenous historical and cultural issues, and its core interest in imagining a powerful, hopeful, and playful future for First Nations people can serve as an example both for machinima-makers of any provenance and for First Nations artists looking for a medium through which to express survivance.

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11

World of Chaucer

Adaptation, pedagogy, and interdisciplinarity

Graham Barwell and Christopher Moore

Introduction

Machinima is a new media practice that began with the self-directed experiments and explorations of enthusiastic gamers and hackers. Over its comparatively short history, machinima has become an accessible and vibrant participatory media, fueling a desire for creative investigation into its possibilities as an expressive and communicative media art-form. Machinima has produced a variety of modes and genres, from the knowing anti-war humor (Starrs 2010) of the *Red vs Blue* series (2003–present)[A] to the competitive action of e-sports gamebattles on Major League Gaming[B] to the dystopic combat action of Drakortha's *The DC Chronicles* series (2011).[C] While some have used machinima

to convey educational messages or retell literary works, the full potential of machinima as a pedagogical tool is yet to be determined. In this chapter, we discuss a trial of the machinima production of a version of a Chaucer tale as part of the learning activities of tertiary students in two humanities disciplines. The interdisciplinary and collaborative making of machinima was intended to support the students' development of digital literacy skills and understandings relevant to their disciplines. As an interdisciplinary participatory media practice, we argue that machinima can encourage fruitful collaboration across multiple disciplines through the processes of remediation, adaptation, and review.

Digital literacies and the pedagogical affordance of machinima

Scholars have pointed out that students are not the well-prepared, media-producing, technologically proficient new media users we may think they are (Kennedy *et al.* 2007).[D] While this difference between the experience of the students and the capacities of the Web 2.0 and digital media platforms available to learning in higher education settings may seem problematic, students today are nevertheless highly proficient across many participatory and social media technologies. Their everyday lives involve a great deal of creative, economic, and cultural production, especially of the self: forming and maintaining network connections; producing and uploading images; tagging; commenting; updating statuses; and microblogging. These activities are just a small step from the critical and creative potential of blogging, podcasting, videocasting, and making machinima. In other words, they are keen users of mobile communication technologies and Web 2.0 who arguably have not yet realized their critical potential.

Success with all of these activities requires the development of a broad range of skills, attitudes, and understandings which can be categorized under the equally broad term "digital literacies," the need for which schools and universities have been slow to acknowledge. These literacies are commonly developed within "participatory media cultures" (Raessens 2005), often as part of online fandoms, but also more generally as part of the practices of blogging, videocasting, and podcasting, which involve a range of technical and cultural competencies with which young people should be familiar in order to participate in the current digital media landscape. Scholars have conceived of these competencies in slightly different ways. For instance, Susan Luckman uses the phrase "digital literacies" to refer to "the comfortable use of skill sets which allow engagement with digital media as an active and informed user"

(2008, 112–13). We believe such skill sets must be combined with the cultural competencies which Henry Jenkins *et al.* (2009, xiv) place among "new media literacies," which include "play," "performance," "simulation," "appropriation," "multitasking," "distributed cognition," "collective intelligence," "judgement," "transmedia navigation," "networking," and "negotiation." We argue that each of these builds on the foundation of both digital and traditional literacies and, when speaking of digital literacies, thus use the term in this broader sense.

As a new participatory media practice, machinima appropriates and remixes older media forms and styles to find new approaches to doing things with the available technology. Similarly, the practice of machinima helps find new ways of developing those digital literacies that are not only key to empowering students as creators and producers but also requires the doing of new things with traditional literacies. Machinima thus has a range of possible pedagogical applications. In communications and media studies, for example, machinima excels as "a creative, expressive form … with its own requisite skills and associated social and cultural practices" (Carr 2007, np),[E] while for other disciplines and pedagogical contexts machinima production may be utilized directly as a teaching tool and is adaptable to a diverse range of subject areas from filmmaking to nursing, PR, and management training (ibid.). Carmen Luke (2003) suggests that the pedagogical potential of machinima includes making meaning by remixing multiple linguistic, audio, symbolic, visual, and information sources in a way that requires its producers and audiences to draw on "meta-knowledge of traditional and new blended genres of representational conventions, cultural and symbolic codes, and linguistically coded and software-driven meanings." A part of the pedagogical potential of machinima lies in the appeal of its somewhat subversive nature with respect to both gameplay and the curriculum. Henry Lowood (2006, 13) compares making machinima to the exploits of hackers, where producing a linear story with game software requires both the development of expertise and a subversive approach to software code. Machinima subverts the practices and forms of gameplay, transforming the purposes of the game software into those of the camera, and adapts the graphical interface, user input, and game content to serve as stage, setting, and characters for the event. As Hancock and Ingram (2007, 1) put it:

> Machinima is the maverick film-making process that evolved from hackers messing with the insides of their favorite computer games….It's a philosophy, a fervent belief, a technique, and last of all, a technology.

The subversive nature of machinima is now anticipated (and in the process partly tempered) by games developers like Blizzard, the producers of *World*

of Warcraft (2004),[F] who include features within the game's settings and menu options for controlling camera movement and exporting video to digital editing software. In that sense, we see the inclusion of machinima creation in the curriculum also as a parallel subversive or "maverick" move, insofar as it demands a less "vertical or disciplinary rooted cognitive orientation" and greater degrees of "horizontal or lateral cognitive mobility across disciplines, genres, modalities and cultural zones" (Luke 2003). In one sense, this subversive aspect of machinima is drawn out in its pedagogical application as the student operating the game undermines the typical kinds of expectations about gameplay and its relationship to learning and creative expression. In a further sense, machinima undercuts traditional approaches to education by its mere inclusion in the higher education curriculum. Our approach is likewise challenging in that it requires students to carefully manage and critically reflect on their own role, learning, and contribution to the relevant assessment tasks. Indeed, the aim of those tasks need not be to assess machinima's quality directly, but, instead, to focus on the lateral development of the students' research, critical reflection, and understanding of the processes involved in making machinima as it relates to their home discipline, and the disciplines of the other students in their project group.

Remediation, intertextuality, and machinimation

Remediation is central to the process of "machinimation," or the act of making machinima (a term we base on Lowood's (2011, 3) use of the word *machinimators* for producers of machinima movies). The concept of remediation was developed by Jay David Bolter and Richard Grusin with a logic that follows Jacques Derrida's account of mimesis, "where mimesis is defined not ontologically or objectively in terms of the resemblance of a representation to its object but rather intersubjectively in terms of the feeling of imitation or resemblance in the perceiving subject" (Bolter and Grusin 1999, 53). Remediation is thus typically considered as "the representation of one medium in another" (45), but we argue that machinima is more than the remediation of videogame content as user-generated video. While machinimation transforms and re-purposes play as a cinematic or televisual experience, remediation occurs at multiple levels, including at the level of the game software, computer hardware, and the game content, as they are all incorporated into the production of the linear televisual experience via

a recording and ordering of events that are simultaneously live and virtual, impromptu and planned. The *Red vs Blue* series, for example, is a remediation of the sitcom and the war film, but it is also a remediation of the multiplayer environment of the original *Halo* game (2001)[G] and (with the first season) the physical hardware of the Xbox platform. The machinimation process thus demands the translocation of various forms of filmmaking skills, such as selecting locations, scriptwriting, animating or puppeteering characters, editing, titling, sequencing, and sound recording, in addition to a knowledge of cinematic and televisual codes and their readings that are crucial for the successful remediation of the game as online video.

Nitsche (2005)[H] argues that this remediation produces a multi-layered "hyperrealism" through the balancing act of managing the virtual puppetry of production with the "uebermediation" of the visual features and cinematic possibilities beyond those of previous visual mediums. Machinimation transforms the game, adapting its textual and software elements for an entirely separate purpose in order to create a linear narrative, importing the intertextual components of the game but "flattening" the experience as a cinematic or televisual one without some of the traditional limitations (and many of its own new ones) of other filmic practices. For Leo Berkeley (2006), the gameplay element of machinima relates the process closely to the experience of recording a live event, either for television news or documentary purposes. Machinima thereby also remediates the documentary genre and may be "located within a documentary or improvised drama model not normally associated with animation production" (Berkeley 2006, 72). Berkeley notes that there is a range of camera techniques and strategies appropriate for this environment and by which machinima may be characterized as "applying a documentary production paradigm to an animation environment" (72). This is especially true for the live nature of the machinima process in massively multiplayer games like *World of Warcraft* and which made itself apparent in our trial, during which tremors in the world, as part of a major content expansion, disturbed the machinima filming process, while interested players kept getting in the way of the recording.

Tanya Krzywinska (2008) is critical of Bolter and Grusin's (1999) concept of remediation, arguing that it has been fashionable to focus on the ways pre-existing genres and forms have been used within digital games without considering the numerous ways intertextuality informs game genres at different levels and in different registers:

> What is crucial to understanding the intertextual aspects of a game like *World of Warcraft* is that the presence of multiple and deliberately planted

> intertexts encourages a certain type of depth engagement with the game, which extends beyond but also informs the types of game play tasks offered to players. (Krzywinska 2008, 124)

Krzywinska's stress on *intertextuality*, a concept derived from Julia Kristeva's (1980) work, is thus important when considering the functions of machinima as remediation of games, game software and hardware, due to the contribution it can make to the producer and viewer experience. As a virtual puppetry performance and as a new process for reconfiguring and remediating digital media technologies to communicate with new audiences, the intertextual capacity of machinima adds to the potentially subversive experience for students:

> As a subversive dramatic form, machinima breaks down the structure of commercial video games, changing the explicitly iterative system of formal play into a form of meta-interactivity and cultural appropriation of an existing software program. It is a variety of emergent digital authorship that modifies the narrative and textual structure of the video game through the technological agency of the player/director.
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> (Carrol and Cameron 2005, 4)[i]

However, problems for viewers who do not understand the intertextual dimensions of machinima are common, including being unfamiliar with game visuals, genres, tropes, and conventions, or the specific games in use, and not being able to distinguish the correct semiotic codes necessary for reading the differences between games and machinima. Nitsche (2005) suggests that this results in a tendency in machinima to remediate the content and context of its underlying game engine, which helps to "tailor" the result to niche audiences, but will perhaps reduce the impact of the viewing for non-niche audiences. In the same vein, Nitsche argues that *Red vs Blue* loses some impact to those not familiar with the multi-player *Halo* game. In our experience, such viewers, when seeing an episode for the first time, may not immediately recognize the anti-war content of the series. These problems are even more applicable to a machinima title such as *Machinimation Episode 1–Pilot (Machinima)* (2011),[j] where audiences need to be familiar with a range of console and PC games to appreciate the reworking of the source material. However, the reverse is also true, and in the sections below we will argue that the remediation and adaptation of Chaucer and of *World of Warcraft* in the students' machinima projects also serve to introduce these texts to new audiences in new lights.

Machinima and adaptations of Chaucer's *The Canterbury Tales*

With respect to adaptation, we use the term as suggested by Linda Hutcheon (2006), who notes that all adaptation employs the same tools and techniques storytellers and artists have always used to retell stories in their own way; namely "they actualize or concretize ideas" (3) through critique, expanding, and remaking. Hutcheon (2006, 7) also notes that the word *adaptation* refers to both process and product, and defines the concept of adaptation through the intersection of three distinct but overlapping perspectives: (1) as an acknowledged transposition of another recognizable work or works; (2) as a creative and interpretive act of appropriation; and (3) as an extended intertextual engagement with the adapted work, since "we experience adaptations (*as adaptations*) as palimpsests through our memory of other works that resonate through repetition with variation" (Hutcheon 2006, 8). While machinima by its very nature is a remediation and may involve some or all three aspects of Hutcheon's concept of adaptation in relation to the originary game, only some machinima are adaptations of other works. Nevertheless, there is certainly a growing collection of machinima adaptations of works by Chaucer, Shakespeare, Frost, Yeats, and Lovecraft, alongside machinima adaptations of contemporary texts including Hollywood movies and music video clips.[K]

In particular, Geoffrey Chaucer's *The Canterbury Tales* has been widely adapted and remediated since the Middle Ages. The "Afterlife" section in *Chaucer: An Oxford Guide* (Ellis 2004) gives a full account of the range of these activities. Early adaptations took the form of written texts, where Chaucer's work was a starting point for something completely new, or where it was retold in a different mode, such as in the form of a play. His stories later inspired visual artists, designers, illustrators, and cartoonists, and were also remediated into musical genres, such as staged musicals or rap.[L] The tales have also offered fertile ground for makers of films or television shows.[M] While most reworkings acknowledge their sources or inspirations, some do not, such as the film *A Simple Plan* (1998), which has a similar premise to *The Pardoner's Tale*. Sometimes, the reworkings try to remediate the orality of the originals by preserving the device of a storyteller or narrator. As Chaucer's work remains a staple of literary studies and new modes of communication beget new versions of his work, it should be no surprise that some machinimators have turned to it for inspiration. These adaptations have been produced by enthusiastic students and young people who then share

their videos via YouTube. Notably, such machinima represent labors of love by highly motivated individuals without any overt pedagogical function, as in a version of *The Wife of Bath's Tale* (2010) using *World of Warcraft,* where the creators successfully compressed a text of 400 lines into a 10-minute video.[N]

There have also been more elaborate attempts to make use of the capacities of digital games and virtual worlds in the teaching of canonical literary texts, albeit not specifically with machinima. Two examples demonstrate the kind of work which has been done. The first is an attempted virtual world, Arden, which was built in the mid-2000s by a team led by Edward Castronova and modeled on the characters, plots, and historical contexts of Shakespeare's plays. The project was to have two main functions: to immerse its users in the world of Shakespeare; and to provide a synthetic environment for social science experiments in, for example, economics and politics (Castronova *et al.* 2009). The project eventually encountered difficulties, but it was significant in its attempt to use a virtual world for teaching and research. The second example, the Virtual *Macbeth* project, took a different approach by, instead, building an island in the virtual world of Second Life "dedicated to the exploration, adaptation and performance of Shakespeare's *Macbeth*" (Virtual *Macbeth* 2011, np).[O]

Like Arden, it does not present a standard adaptation of the play, but instead offers users different approaches to the play as they move around the island, including the opportunity to explore existing film and video adaptations of key scenes and suggestions for user-created content, like machinima, in relation to the play. We thus see Virtual *Macbeth* more as remediation than adaptation, insofar as it transfers encounters with the play in other media forms (stage, text, film) into a virtual world, and recognizes that its audience will be familiar with machinima.

Both Arden and Virtual *Macbeth* aim to develop users' understanding of the world of the author or of the individual text, and both depend on elaborate synthetic worlds to produce this. In Virtual *Macbeth,* machinima is presented as a legitimate pedagogical tool, like role-playing and reworking scenes in different dramatic modes. The notecards,[P] which include suggestions for using it and are provided under "Teaching Resources" on the project's Wikispaces site (Virtual *Macbeth*), are formulated in a way which implies that the key outcome will be a greater understanding of the play and its themes. For example, one notecard suggests: "Make a machinima based on the theme of temptation."

However, helpful as they are, in contrast to Arden and Virtual *Macbeth*, our interest in virtual worlds is not in building or in building within them, but in seeing what opportunities a well-established game world can offer for linking machinima creation to pedagogy. In particular, we use collaborative learning to make this link and enable students from different disciplinary backgrounds

to work productively in machinima creation. As yet, there is limited literature on the subject in new media environments, with most attention given to wikis and blogs (see e.g. Elliott 2008; Judd *et al.* 2010).[Q] In relation to the pedagogical potential of machinima, recent work has concentrated on digital analysis, computer game literacy and practices in collaborative spaces, but within media and education rather than across the humanities, sciences, or other disciplines (e.g. Kringiel 2011; Payne 2011). There is room, therefore, for the collaborative possibilities of machinima to be investigated, to which we will now turn.

The machinima trial

In the light of our awareness of recent developments in machinima and pedagogy, and our interests in integrating new media practices into the curriculum, we decided to create a small-scale trial in two subjects we had designed and coordinated in Arts and Humanities disciplines, namely English and Digital Communications. Our trial was designed with a number of aims in mind, including improving digital literacies, raising skills awareness and acquisition, increasing understanding through remediation and adaptation, and promoting collaboration. We recognize that machinima is a creative "hack," a "mashup" of two distinctly mediated experiences. Playing the game and making online videos mixes the skills of the game player with those of the YouTube channel contributor, adapting the former to the latter. As a pedagogical tool, we feel that machinima concentrates the creativity of play with the critical and interpretive functions of adaptation and remediation in a linear televisual experience using the digital literacies acquired from the participatory media cultures of networked lives. We wanted to see if incorporating a machinima experience would enable students to acquire or improve those skills, and to subsequently reflect on them. The development of digital literacies would thus be in association with the traditional forms of criticism and research required of the students' home disciplines. For the English students, these include close reading, interpretation, translation, and developing a sense of audience. The Digital Communication students' experience, on the other hand, lay in experimenting with a range of new media and social media in order to examine communication technologies and practices and to critique their implications. Accordingly, we anticipated that the process of using machinima to adapt Chaucer would facilitate the acquisition of critical skills, and, through the experience of collaborating on the design and production of the machinima, students would confront the challenges

faced by anyone adapting a work into another medium to produce a text. We believed that foregrounding adaptation and remediation as a key part of the trial would benefit both groups of students from the two disciplines involved. For example, students in English would be able to add machinima to adaptations they were already encouraged to examine as part of their work in the subject.

We were particularly interested in bringing together two usually separate groups of students to create machinima from the unpredictable massively multiplayer online environment of *World of Warcraft*. The "world" of *World of Warcraft*, called Azeroth, is a high-fantasy setting that combines a bricolage of popular cultural references and classical intertextuality with a digitally networked three-dimensional environment. This made it ideal not only for the adaptation of a medieval writer like Chaucer, whose work comes from the period which provides significant details in the fantasy world (such as village and castle locations, characters such as dwarfs, and accessories such as armor, swords, and bows and arrows), but also for exploring the remediation capabilities of machinima, since *World of Warcraft* is a well-established and familiar multi-player game, with opportunities for machinimation built into its design. The intent was to test machinima-making as an activity that would not only facilitate collaboration but would also call upon students' active learning and problem-solving skills as part of an interdisciplinary team (Barwell *et al.* 2011, 767).[R]

We ran the experiment with volunteer participants: five students studying first-year Digital Communications (Bachelor of Communication and Media Studies) and four students in a second-year Chaucer subject in English Literature (Bachelor of Arts). Our apparatus was the production of a machinima adaptation of a story from Chaucer's *The Canterbury Tales* using the *World of Warcraft* game engine via Apple's *iMovie* (2010)[S] and Google's YouTube website.[T] Not all students in either home discipline participated in the machinima experiment: other English students wrote independent research essays on Chaucer, while the majority of the Digital Communication students chose to do independent web development projects. The small groups from both cohorts had specifically elected to take part in the project.

We arranged for the student volunteers to meet with a technical support officer once per week for eight weeks in pre-arranged computer lab bookings and provided them with copies of the game and prepaid game accounts. We communicated with the student participants in class and via Skype during lab times. Since the timetable for the two subjects did not overlap, we also organized a Facebook page for the students to use as a forum and corresponded by e-mail with those involved. The Digital Communication students were to produce the machinima using a script provided by the Chaucer

students. The students determined the negotiating process, the production schedule, and whether or not they would proceed to a final output in the form of a public video posted on YouTube.

The machinima itself was not to be the subject of direct assessment as the desire was not to transmit a fixed understanding or body of knowledge, but to support the learning of the students. However, the work going into its production was designed to fit into the pre-defined criteria for the assessment tasks of the individual subjects. The Digital Communication students substituted the machinima for a web project which was to be assessed on the basis of a weekly blog and the completion of other tasks, with the criteria focused on their degree of engagement, reflections on theoretical materials, approaches to and aspects of design, and project management. The English students could substitute one of the final essay topics with an extended consideration of the issues that arose in adapting the Chaucer tale, whose assessment criteria included the quality and perceptiveness of the analysis, theoretical awareness, and familiarity with relevant secondary literature. Due to the hardware, networks, and policies of individual educational institutions, these methods might not be applicable to all disciplines or be readily available, but the focus on an experience, rather than direct assessment of a product, is the general approach we recommend in the use of all digital forms of communication media. Because of the focus on the potential of machinima for enabling interdisciplinary collaboration, we were happy to give greater emphasis on the process resulting in the product rather than on the product itself.

As might be expected in the first iteration of such a trial, we encountered a range of obstacles and constraints. Choosing a massively multiplayer game like *World of Warcraft* leaves open the possibility of interference from players not involved in the trial, while game manufacturers regularly update the game world, which also disrupts the machinima production process. Both of these factors caused difficulty for the students. Undertaking this kind of trial in an institutional setting where enabling student gameplay is not an established use of the available technical infrastructure also posed problems, eventually overcome through the support of relevant staff and the enthusiasm of the students themselves. Not having a shared timetable made it difficult for the student teams to meet, and there was surprising resistance to the use of social media or other communication media as a basis for interaction beyond e-mail. Having students negotiate the collaboration and organize the production schedule also led to delays and frustration for some of the participants.

Nevertheless, student commitment was so strong that a number of the participants saw their projects through to the end, even after the assessable

components of their course work had been completed. Towards the end of their course, the students decided to upload their videos onto YouTube,[U] and structured group interviews were conducted with the two groups of students. Interviews with the students' tutors and the project's technical support advisor were also conducted. We received further student reflection from blog posts by the Digital Communication students and analytic essays together with scripts from the English students.

As a pedagogical experiment, the pilot provided a surprising range of positive and negative feedback on the degree to which those involved felt they had learned from the use of making machinima. The discussion in both student group interviews covered a range of topics, including their individual level of participation, disciplinary background perspectives, previous experience with digital media production and other digital literacies, and their understanding of collaborative and interdisciplinary project work. The interviews provided insights into the students' perceived technical capacities to undertake the machinima project, the anticipated and achieved learning outcomes, the literacies that were developed by each cohort, as well as some suggestions for future iterations of a similar interdisciplinary assessment task. We have previously provided conclusions and reflection on machinima as a teaching tool and how student work might be assessed (Barwell *et al.* 2011), but here we offer an analysis of the project feedback in relation to broader understandings of machinima and its relation to pedagogy.

Digital literacies of machinima

Middleton and Mather (2008, 208) consider machinima, together with blogs, wikis, podcasting, student-generated video and other forms of digital storytelling, knowledge generation and information sharing, as part of a media intervention curriculum design methodology. They encourage teachers and academics to view digital media tools and objects as resources that promote active student-centred learning. Machinima-based challenges, either in viewing or producing, that are attuned to the relevant curriculum should provoke ideas and provide engaging problems for students to overcome, in the process effectively affecting the learner. The importance of affect in a digital networked learning environment cannot be underestimated. Silvan Tomkins (1962) notes that the affect of interest is a necessary condition for what he calls "radical intellectual creativity" (337):

> Whenever perception of thinking or action is accompanied by and powered by excitement, we are dealing with creativity. Perception is novel, thinking

> is novel and action is novel when excitement activates and guides these mechanisms. As novelty declines, the affect of excitement abates, and the same information whether perceptual, cognitive or motoric, drops out of consciousness to make way for information which requires excitement and creative perceiving, creative thinking, creative decisions and creative action. To create is to make something which the maker has never made before.
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> (Tomkins 1962, 253)

Or, to put it in the words of a Digital Communication student:

> It's a bit like, OK, this is going to sound like a lame metaphor, but you know how when you cook pancakes, you do the first one and it is really bad, it is just weird, and then the next one is excellent? I think machinima is just like one of these things where the first one is all really, nuh uh, and the second version is good as you learn from your first mistakes.

The novelty of the pilot attracted the student participants and contributed to their early excitement and experimental attitude towards the project; but, as Tomkins notes, such novelty dissipates and clears the way for students to focus on their own critical perspectives and creative thinking, forming new pathways for further learning. The students demonstrated that they were not afraid to make mistakes while exploring the expressive and communicative possibilities of the media form. The pancake metaphor also reminds us of the need to provide support for the students' acquisition of digital literacies in a way that enables them to learn from their own mistakes, and to make comments and improvements over time. This approach will also help prepare students for the workplace in a digital environment that is networked, public, and subject to rapid changes in technology and content.

That the initial novelty led to creative thinking and continuous learning is, we think, a successful outcome of the project, evident in the focus group interviews, blogs, and essays as students reflected positively on their perception of the project, which had helped to expand their digital literacies and experiences with new media production. Considering the students had no previous experience with machinima and only two had any previous experience with the game, their production of the machinima and uploading of the video online, all within eight weeks, was quite an achievement. This was only anticipated as part of the project, and was by no means a certain outcome of the experiment. Nevertheless, it demonstrates that, in terms of Luckman's (2008) conception, the students had certainly acquired a range of skills, competencies, and digital literacies. Specifically, developing those literacies involved getting beyond the initial novelty of the project,

understanding relevant concepts, managing and using the available hardware and software effectively, coming to terms with the possibilities and practicalities of digital film production, and establishing collaborative group dynamics. The problems the students encountered while producing their machinima are part of the everyday experiences of using digital media and other technologies for collaboration. Overcoming the constraints of the media form, as they attempted to adapt Chaucer as machinima, is similarly part of the process of developing digital literacies. As two Digital Communication students reported:

> And by the time I finished my downloading and I cleared all this room on my computer to get [the game] on, *World of Warcraft* updated their site, and I go to login, and it's like "sorry we've redone it, you're going to have to download the entire thing all over again!" And I was like, what? It was such a nightmare.
>
> Because *World of Warcraft* is online only, there are a couple of problems. Like a couple of times filming, when we were standing there trying to film something, someone would walk up and go "what are you doing?"

As the novelty declines and the students work to overcome problems that arise and their own limitations, they develop and stretch their understanding of the media form, giving way to new possibilities and novelty in a cycle of learning as they produce something they had likely never considered themselves making previously, or making it in previously unconsidered ways.

Adaptation, remediation, and machinimation

A media intervention experience of the kind advocated by Middleton and Mather (2008) encourages students to remix, reuse, and remediate existing media objects that can be accessed through resources like the Internet Archive (which has its own machinima archive),[v] from sites that use the Creative Commons copyright license and via search engines such as the image archives at Flickr.com. We add to this approach by emphasizing the creative and pedagogical value of this model where the focus is on process rather than results, and it is crucial to recall Berkeley's comments that "one of the most distinctive features of the machinima form is not apparent in the finished work but occurs during the production process" (2006, 66).

Multiple layers of remediation processes are involved in making machinima, and more so in the machinima adaptations of Chaucer in a game like *World of Warcraft,* as students learn to retell stories through a digital medium not

initially designed for that purpose, reframing their contextual understanding of the material and its production. Chaucer's work, like that of Shakespeare's and countless others, is a remix of previous stories, legends, myths, jokes, and tales adapted to a popular media form of their time. The student's machinima is thus one more adaptation, in Hutcheon's sense (2006, 7), in a long line of repetitions that are without replication, experimental, deliberate, announced, and extended reworkings of another text. In terms of the remediating power of machinima and as a means for the adaptation of Chaucer, the students are not only "performing" the tales in *World of Warcraft*, they are also producing a new text which is distinct from these two sources. This double nature of adaptation requires students to challenge their own knowledge (or lack of) about the canonical text and means for adapting it, and to rethink the "game" as a tool for creating online user-generated video. This aided in the interdisciplinary aims of the project, since Digital Communication students had to manage the limitations of the *World of Warcraft* game as a platform for producing machinima by communicating effectively with the Chaucer students, who then found they had to think hard about "what was a more entertaining way of showing the story" in a different medium. One student commented:

> Because we had to interact with people who had no idea what Chaucer was about, we actually had to know the subject kind of very well in order to explain to them what we were doing. So it kind of forced us to read the text deeply—more than we might have in class.

During filming, two students on Macbook laptops were able to meet others in-game on PCs, where they interacted, staged recordings, and filmed the scenes. Although the software integration between Apple's *iMovie* and *World of Warcraft* does make using OSX attractive for capturing and editing video and audio, avatar movement and the animation of individual game characters are constrained. Students experienced a degree of trouble with this live environment and several reported wanting a more granular control of the character and environment that games like *The Sims* (2003)[W] may have offered. One student was expecting to be able to animate each limb and manipulate detailed facial expressions in the way of using a desktop 3D software tool such as *Blender* (2011)[X] or *3ds Max* (2011).[Y] As a group, the students directed the use of "emotes," the pre-scripted avatar movements and gestures that can be keyed by the avatar's user in real time. Restrictions on camera movements, lighting, and other production elements may also be overcome through "mods" and other programs that have become popular

amongst *World of Warcraft* machinimators. The limitations of machinima as a form of virtual puppetry do not necessarily lead to bland performances, as Nitsche (2005) suggests. While the emote functions, the limited camera tools, and the "gameness" of the environments may seem to curb the potential for emotional depth, the results, when treated cinematically through the arrangement of narrative, editing, the addition of sound and other filmic techniques, do produce emotional moments that are "surprisingly effective" (Berkeley 2006, 72).

Kristevan intertextuality is also a component of the interdisciplinary potential of machinima-making that helps to expand the dialogic relations between different disciplines and media forms. It is not simply a matter of acquiring the knowledge of each discipline involved, or even of how those fields interact, but rather the communication and learning between those developing knowledge in disparate fields and who have similar but differently located subjectivities in the approaches they bring to the texts and the formation of the new text. In terms of intertextuality, machinima is a multi-layered mashup, and machinima made in an attempt to collaborate across two humanities disciplines is even more so. The arrangement of the machinima results from a multiple exchange of symbols, memes, and intertextual reference points of content and context. The final product works for the viewer simultaneously through mimesis and juxtaposition of game and adapted text, allowing its producer and audience to re-experience both texts as they are remade and remixed. The unique creation that emerges from the production is, in Derrida's terms, a result of the freedoms of the creative learning act occurring not between two produced things but three producing subjective fields: the original, the remediated, and the new.

While the student machinimators did not theorize their practice in these terms, they did have to develop some of the cultural competencies which we argue are part of the broader understanding of digital literacies. These included play, performance, multi-tasking, and judgment as they explored the possibilities of the game world. Success in some of the other literacies and new media practices, notably collective intelligence and negotiation, was more challenging, particularly in the process leading to successful collaboration. This was recognized by all concerned, with one of the tutors commenting that participants "connecting with the other students that they didn't know was really hard," even though it was crucial, since neither group could succeed on their own. Nevertheless, the application and development of digital literacies together with the novelty of the project, the excitement it generated and the good will of the student volunteers all worked to produce, in the words of one of the Chaucer students, the "independent learning,

problem-solving and interdisciplinary collaboration that made the project so original (from a pedagogic point of view) and vital (from my personal experience as a student)."

Conclusion

We believe that the results of the trial positively indicate the potential of machinima production as a pedagogical tool. The students' work in Digital Communications showed that they had acquired a range of digital literacies and skills to enable them to produce a short piece of machinima, while the Chaucer students were encouraged to think more deeply about the linguistic and narrative features of the source text as well as about the process of adaptation. Both groups learned something of project management and demonstrated high levels of engagement with the project. Even though the degree of interdisciplinary collaboration was not as comprehensive as we had hoped, this is not a consequence of any particular limitation of machinima as a pedagogical tool. In a second iteration, we would arrange matters, such as a shared timetable and a more prescribed project schedule, in order to better facilitate collaboration. While a larger scale incorporation of machinima into the curriculum would require more fully integrated IT support at the institutional level, the choice of a massively multiplayer online game, like *World of Warcraft,* means that participants will always need to deal with potential intrusion from other players or with major updates to the game world. These matters are beyond an instructor's control. Despite the difficulties encountered in the experimental trial, the participants, whether students or instructors, were universally enthusiastic about the experience and the benefits. As one student participant put it, "I think this project was remarkable and satisfying because, unlike an essay where you've got nothing at the end, with this you've got something you can watch back and say, yeah, I did that!"

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12

A pedagogy of craft

Teaching Culture Analysis with machinima

Jenna Ng and James Barrett

The handcrafted object reflects not only an informal economy of energy (as opposed to one of process efficiency), but also pleasure. Its production involves some play, some waste, and above all a kind of communion.

McCULLOUGH 1998, 10

Make something. Don't just look at numbers and criticise things.

AN EMPLOYER AT A LARGE INDIAN FIRM, *THE ECONOMIST* 2011A, np[1, A]

Introduction

Machinima is commonly associated with various other media forms such as games, television, cinema, theatre, and music videos. A brief overview, already well documented by other scholars, suffices here. Originating in gameplay, machinima began as "demos"—data logs which can be played back to relive past events in a game world, typically used to replay gaming action or record remarkable performances (Lowood 2005, 2006; Nitsche 2007)—in a process already cinematic in its Lumiére Brothers-esque recording of game reality (see Burke, Chapter 2, this volume). Such "high-performance play" (Lowood 2005, 11) morphed into narrative cinema with The Rangers' hacking of *Quake* (1994) to make *Diary of a Camper*[B] in October 1996 (Lowood 2006), as the players appropriated the game's camera perspective (from first-person shooter to an independent viewpoint), edited disparate shots, and formulated visual narrative with its sequences. As machinima evolved, other media forms drove its format, language, and aesthetics. Well-known machinima such as the *Red vs Blue* series (2003–present)[C] and the *Une aventure de Bill et John* episodes (2006)[D] adapt the episodic format of comedy television and rely on theatrical comic timing and voice acting, even reminiscent to a certain degree of absurd theater, as found in Beckett (Arvers 2010, 236), for their success. Nitsche directly links machinima with live performances "acted out inside the virtual world and presented in different formats to the audience" (Nitsche 2005, 213). Other scholars see works such as *Edge of Remorse* (2006)[E] and *Rise of the Living Dead: The Turning* (2006)[F] as particularly cinematic (Hancock and Ingram 2007, 362; Pigott 2011). Elements of older media are not only integrated, but also subverted in machinima: Jeffrey Bardzell discusses a "resistance stance" in machinima that "seeks to subvert the reality of the game or subordinate it to the vision or meanings that the machinimator seeks to express" (Bardzell 2011, 208). The places, bodies, and actions of the game become the stage and scenery of machinima.

Screen media and performance thus abound in current machinima scholarship. However, machinima is also very much a *made* object, composed both as a technology and a thing. In making machinima, game technologies are modified, subverted, adapted, even re-created.[2] But that is only one part of the story—making machinima also involves designing and building virtual objects and sets, creating and dressing avatars (often with custom-made clothes, accessories, and skins), writing scenarios and scripts, and recording acting voices. In that respect, machinima is also a thing—an object—constructed through a series of processes and fashioned with a set of skills. This *crafting*

of machinima, in the sense of it being formed as a complex digital artifact, is often overshadowed by its more dominating importance of being a media object. At first glance, the connection between machinima and craft appears unintuitive. The common notion of craft involves a tangible object—what Paz calls "the craft object," "made by human hands" (quoted in McCullough 1998, 10)—such as a pottered water jug or a handwoven basket, invoking sensuality and physicality. Craft also implies elements of physical skill giving rise to a slow, tactile, and responsive process of creation. Early images from Denis Diderot's *Encyclopédie* (1967), for example, depict craftsmen hunched at large tables, bent over their tools in workshop-like environments, hands busily working away at unfinished products.

On the other hand, machinima, like all digital objects, is fundamentally intangible. It may be *contained* in something physical such as a DVD (indeed, the CD-ROM accompanying *Machinima for Dummies* (Hancock and Ingram 2007) contains, among others, some of the authors' "top ten Machinima films") or a thumb drive holding a demo file, both of which may, in different ways, provide access to the game movies they store. However, its basic ontology as a film is binary code—strings of zeros and ones—which as an artifact or object does not take any humanly recognizable material form. Furthermore, with so many computer processes in the creating of machinima—moving avatars, recording onscreen captures, editing digitally, uploading and distributing online—there appears to be little "hands-on" making, save for perhaps the prodigious controlling of a computer mouse. How, then, might machinima be seen as craftwork?

In this chapter, we will attempt to answer that question, as well as elaborate on the significance of linking machinima to craft as a means to the learning of knowledge and skills. As we will explain, the process of making imparts valuable skills and contextualizes learning in frameworks of experience and practice, re-formulating concepts and ideas to make them more memorable and allowing for more effective analysis. Machinima as craft thus offers pedagogy the possibility of making—and thus learning—in numerous contexts, such as film, music video, theater, design, architecture, and performance, in relatively cheap and efficient ways, and without the need for costly equipment such as physical cameras or complicated logistics of onset filming and recording.

The chapter will proceed as follows. We first discuss how machinima may be deemed to be craft through canvassing its definition, before examining the characteristics of making machinima and comparing them to those of traditional craftwork. The next section explicates the connection between craft and teaching, primarily as it is used in HUMlab, Umeå University, Sweden, and finally we describe a case study from the lab of using precisely those

qualities of craft in machinima as a teaching method for a second-year media and culture course.

Machinima as craft: creativity, knowledge, and dexterity

The Webster dictionary defines craft as "an occupation or trade requiring *manual dexterity* or *artistic skill*" (emphasis added), or the products thereof, taking into particular account its derivation from the Middle English *craeft*, which means strength or power. In later meanings, power is taken more specifically to refer, again, to dexterity or specialized skill in the manual arts. More in point, Maureen Turim (1999, 51) appears to specifically exclude digital imagemaking from craft, insisting that it is the palpability of the object that inspires craft:

> Yet we should remember that other artists steeped in the craft of image making know that cumbersome manual techniques were part of what evoked their ingenuity and provided their inspiration. Material art making has a sensuality and physicality that varies from medium to medium.

However, the meaning of "craft" is not so straightforward, let alone its associations of dexterity or manual skill. Paul Greenhalgh (1997, 24) baldly states:

> Whilst craft has represented specific ideas at any one time over the past three centuries, it has continually developed and changed. Time-laden and traditional as it might seem, the years have not bestowed the word with a solitary or even consistent meaning.

In particular, Greenhalgh (1997) describes the shifts in the meaning of the word "craft" in four contexts: (1) Caleb's 1729 publication, *The Craftsman*, which "carried no references at all to making processes of any kind", referring instead to the general sense of "craft" or "shrewd" (22); (2) its definition in Samuel Johnson's *Dictionary of the English Language* in 1773, which showed that "it could include the concepts of making and skill"—one definition of craft being "manual art or trade" (ibid.); (3) Gustav Stickley's founding of *The Craftsmen* in New York in 1901, which "clearly understood craft to principally relate to processes of making, but there were no limitations to what techniques or genres the word applied to" (24); and (4) Paul and Angie Boyer's publication in 1981 of *Craftsman*, which not only offered support "to those

who manufacture goods by hand using what are thought to be traditional methods" but also carried an ethical agenda to protect "traditional crafts" in danger of "being forgotten in favour of something requiring less skill and creativity" (ibid.).

The purpose in outlining this list is not to decide on any one definitive context of craft but to illustrate the fluidity of its usage and agendas. Even if one were to accept that craft does require some form of "hands-on" application, it still begs the question, posed succinctly by David Pye: "Is there anything done by hand?" (quoted in Dormer 1997, 137). Pye argues that almost every form of making—save a few examples such as basket weaving and pot coiling—involves tools of some kind, including tools which are sophisticated, time-saving machines. More recently (and perhaps most adroitly pointing the way towards machinima as craft), technology is even seen to be subsumed within the object's construction itself, and deliberately included not only within the definition of craft, but tasked with "saving" its creative components. As part of his October 6, 2011 to February 9, 2012 show at the British Museum, "The Tomb of the Unknown Craftsman,"[G] English artist Grayson Perry displays a 7-meter tapestry called "Map of Truths and Beliefs."[H] First drawn by hand, the tapestry was "then scanned into a computer where the artist refined the colours. It was then woven on a huge computerised loom" (*The Economist* 2011b, np).[I] The idea of a "computerised loom" potentially negates the tapestry as craftwork (evoking as it does the violent reactions of hand workers to the Jacquard Loom of 1801 with its punch-card system), whereby one requires in that definition of craft the work of manual labor in the shape of hands working a loom shuttling over warp and weave. Instead, Perry, known best for his ceramic vases and pots, distinguishes between craft as "stuff that you can learn" and art as being about "self-realisation." Most significantly, "he believes that digital technology will save craftsmanship because it separates the creative process from the drudgery of producing the work" (*The Economist* 2011b, np). In a chromatography of craft, Perry specifically extracts its creativity of conception—"the creative process"—from the dull application of its manual techniques or labor—"the drudgery of producing the work." One no longer leads to the other; the former is instead emphasized at the expense of the latter, now driven out of the equation for literally boring craft out of existence.

The processual may then be the initial step towards looking at machinima as craft: even though machinima is made entirely through digital means, it is nonetheless an object born out of a creative process—in fact, quite a number of them. From scriptwriting to set designing, object customizing to acting, camera handling to editing, lighting to music composing, each of these processes requires a great deal of creativity (and time) to be done well.

Most, if not all, will become parts of a machinima work. We argue further that the core of machinima's creativity lies in the subversion of its media, the deliberate undermining in all manner of its origins as a game or a 3D world. Take, for example, Friedrich Kirschner's *The Journey* (2008),[J] a beautifully sparse, almost minimally designed machinima piece which captures one's attention both in its compelling story of "the one who broke away" as well as the spectacle of its aesthetic and, in turn, wonderment of its differences from the original *Unreal Tournament* (1999) game engine. Even if such extensive hacking of game source code is not involved, machinima may also be creative in undermining the content of its origin. The well-known series, *Red vs Blue*, does not tamper with the visual aesthetics of *Halo*, yet so much of its humor lies in the wild collisions between the open violence of its masked warriors in the original game against the machinima episodes' articulate philosophizing soldiers ("why are we here?"), with lids blown off their personal lives and even afterlives, revelations of ex-girlfriends and former relationships, and, ultimately, its anti-war sentiment (Starrs 2010). As Clive Thompson writes in the *New York Times*: "I was reminded of what initially cracked me up so much about 'Red vs. Blue': the idea that faceless, anonymous soldiers in a video game have interior lives" (2005, np). Finally, consider some of the best examples of Second Life (2003–present) machinima, such as the visually stunning pieces made for the Madrid pavilion and exhibited at the World Expo in Shanghai in 2011.[K] Although filmed in Second Life, the objects that so richly fill the screen were authored separately in 3D modeling programs and imported into the virtual world before being recorded to create the machinima pieces. The virtual world, originally a platform for avatars to meet and socialize, is now a toolkit for mash-up extraordinaire.

We thus see the craft of machinima not so much in the *creating* of it—of advanced digital authorship—but in the *creativity* of creating it, particularly in the employment of wit, subversion, and mischief. In those last three words we echo Schnapp and Shanks's notion of craft, as stated in their manifesto for "Artereality (Rethinking Craft in a Knowledge Economy)," as an experimental model for "advanced-level art education":

> We embrace the notion of craft as located work, embeddedness in the materiality of a medium, thoughtful practice, flexible bricolage, but also *as a skill in the sense of playful mischief — media wit, subversive intent, digital tricksterism, Odyssean* metis *deployed in the physical or virtual domain*. Kraft is power in a reconfiguration of practice as design through the articulation of hand, heart, and mind.
>
> SCHNAPP AND SHANK 2008, np; emphasis added

We see machinima as craft not so much in the application of manual labor as in the skills related to its creative process, principally in upending its media form and content. Craft in that sense also shades into its 1729 context (as mentioned above), referring not to processes of making but instead "to the general sense of 'craft' or 'shrewd'." It is about creativity in a subversive, riotous way of doing things.

Nevertheless, should the argument of dexterity be insisted upon, we also see machinima as craft in terms of something to be made with dexterous skill of the hands, substantial direct manipulation, hard work, and, above all, raw material. Malcolm McCullough in *Abstracting Craft* (1998), a monograph on the philosophies of digital craft, argues for elements of manual dexterity even in general computer actions, such as typing on a keyboard and controlling a mouse, which do not invoke the physical labors of traditional craftwork. He locates such dexterity in various contexts, of greatest interest to us being what he terms "aspects of inarticulable skill" which he finds in the reflexive and coordinated combinations of actions in using a computer:

> If you use a computer, you might observe several aspects of inarticulable skill in your everyday work. You might feel that this begins from manual dexterity. You have probably learned to find mouse positions and control key combinations by reflex. Your hands and eyes become closely coordinated […] . You may recognise the importance of sequence […]. *With practice you become able to execute tightly synchronized combinations, as if you were playing an instrument.*
>
> McCULLOUGH 1998, 26; emphasis added

McCullough argues that these combinations of actions in using a computer require synchronization, coordination, and reflexive control, and as such constitute manual dexterity, a position with which we agree and, moreover, recognize as characteristic of most craftwork. Making machinima is thus similarly dexterous in its use of extensive coordination and skillful amalgamation of actions in controlling the mouse and coordinating mouse action with typing on the keyboard. Such actions include corresponding avatar movements with the camera; building sets; creating objects; setting lighting; incorporating, adding, aligning, and mapping textures to objects; creating three-dimensional objects with Maya or other modeling programs; or drawing on Wacom tablets to create avatar features. In digital spaces where avatars are not totally under human control, such as *The Sims* (2000–12), painstaking adjustments must be made to frame and angles for visual perspective, all done with patience spending hours waiting for the right body movements to take place. Editing also requires meticulous coordination in dragging and

aligning sound and image tracks. Sound tracks also have to be coordinated by integrating dialogue with ambient sounds, foley sounds, spatial audio (e.g. off-camera sound), special effects, and music. If performing machinima live, sound, acting, movement, and camera all have to come together in ever-tighter combinations in the splitsecond timing of the live arena. In these ways, creating machinima involves intense and meticulous labor, often requiring large amounts of hard work, concentration, and organization.

Moreover, we argue that these actions on the computer in making machinima also constitute craft in the sense that they are creating *digital objects*, much as weaving creates a basket or throwing produces a jug. Digital objects in machinima are not only made with the skillful combinations of physical computing actions described above, but also with acute concentration, effort, and diligence over extended periods of time. We do not see the value of these objects diminished in any way by their intangibility (in the sense that they cannot be touched physically). Rather, we see them as being "real" in two ways: first, as with physical objects, they are *constituent*—they emerge from a certain reality (their digital world) and via certain raw material (the game engine) and occupy time and space. These are not the objects created from scratch, so to speak, as with a computer-generated object, fashioned out of primitive geometric shapes.[3] These objects already *exist latently* in the game or virtual world, compliant with the world's reality—its physics, its aesthetic, its materiality. A car bouncing off a road in *Grand Theft Auto* (1997) does so according to the physics of that world; the reflection of light on metal armor in *Halo* would be congruous to how the game world operates according to its engine. There may be qualifications to this: objects in a game world may be heavily modified, or created in a separate program and then imported into the world. Nonetheless, once an object is inserted into a game world, it becomes part of that world's extant reality—it partakes in its fabric, exists in its space and time, is experienced in similar ways by other members of that world. Mouse moving and typing are thus not just skillful actions, but actions which constitute the actualization of a digital object in a world which is reflective and possessive of that world's reality (to be part of it, to be experienced in it, to be in its space and time). We thus also see such actualization—this creation of objects through dexterity—as part of craftwork.

A final way to view machinima as craft is to see it as knowledge. Peter Dormer (1997) distinguishes craft from non-craft production in terms of "personal know-how" versus "distributed knowledge." The former is straightforward: you know it if you feel you know it—"to know how to throw a pot is to feel how to throw" (139)—and it generally comes from experience. The latter is more complicated, and rests on two ideas: the first is that many people today can make a single object, "the comingtogether of a variety of

disciplines and industries" (ibid.). No one person, for example, is capable of making a television set, as it involves too many types of expertise. The second idea is that, even if there are tools, including software, which we can use without possessing the know-how to make them, there are still ways of using those tools, or indeed software, with other skills. Hence, to use Dormer's example, a user of molds may not be able to model a figure, but she "may be a superb colourist and decorator" (Dormer 1997, 140). Hence, although technology may have removed a whole set of skills that might otherwise have constituted the essence of that craftwork, "it does not follow necessarily that technology removes the need for personal know-how" (ibid.). In other words, the notion of craft is not negated by the use or presence of technology but is instead re-defined to include the application knowledge in terms of personal know-how. To that extent, Dormer concludes that craftspeople are people who "are seen to be in control of their work," with such control being the possession of "personal know-how that allows them to be masters or mistresses of the available technology": "it is *craft as knowledge* that empowers a maker to take charge of technology" (ibid.; emphasis added).

To that extent, we see the application of such personal know-how in machinima in a variety of forms, and any machinimator will testify to its steep learning curve, some of it to be overcome by experience alone. A summary: first of all, the machinimator needs to know the technical controls of the engine she is using. When we taught a technical workshop on making machinima in Second Life,[4, L, M, N] half of the time was spent teaching students how to operate in the virtual world, even before they came anywhere near to making machinima. Steps such as learning how to create and log into a Second Life account, how to create, move and gesture an avatar, and so on were crucial, if tedious, first steps to mastering the engine. More sophisticated steps follow: how to change an avatar's facial features (skin tone, eye color, hair, brows, eyes, nose, mouth, jaw); how to acquire accessories, such as facial hair, makeup, glasses; how and where to purchase clothing. The work of entire makeup and costume departments is carried out with the acquisition of such knowledge. At more advanced levels, one learns how to design and create sets from prims; to think through their color, light, space, practicalities, details, realism; to shift heightmaps; to build from pre-set tiles (or equal-sized parts of a map); to create placeables and change their attributes.

Then there are the actual filmmaking techniques, first from the screen capture technology—how to control the virtual camera, how to record—but also from virtually the entire filmmaking process. A basic formula text such as Machinima *for Dummies* outlines skill sets required, from creating and pitching a story, to brainstorming ideas, to developing scenes and acts—"winnowing your ideas until you've got a series of events that combine to give you the fastest, deepest,

most moving and yet exciting story you can work out of your raw materials" (Hancock and Ingram 2007, 73). Then there is scripting, developing narrative, and writing "natural dialogue" ("how do you make the characters sound cool?" (75)), the animating of a scene, setting up shots, creating cast and sets. This is followed by "Filmmaking 101"-style skills, including knowing how to think about camera positioning and shot flow, the 180-degree rule, framing, composition, following eyelines, shot types (wide, establishing, shot reverse shot, close-ups, insert shots, reveal shots, etc.). Acting, sound recording, and editing, including cutting footage and selecting transitions, follow. Finally, the file has to be rendered and distributed. And all this excludes the extensive modifications one could achieve with game engines, or with 3D modeling and animation with specialized software such as Blender, 3D Studio Max, or Milkshape. Making machinima thus requires the mastering of many skills, often intensively and in a short amount of time. We thus see all these skills as pointers to the acute acquisition of knowledge required for craft, as Dormer argues, and the gaining of personal know-how for its creation.

HUMlab: teaching with making in northern Sweden

HUMlab, where the "Kulturanalysprogrammet" (Cultural Analysis Program) is conceived and taught, is a digital humanities laboratory in Umeå University, located in the northeast of Sweden. The laboratory operates its own teaching and research program, but also takes on dual affiliations with departmental courses. The lab rests on various foundational premises of research infrastructure (Svensson 2011), some of the most important being conceptual cyberinfrastructure such as cross-sectional meetings and digital visualization. A part of such cyberinfrastructure is the facilitation of "multiple modes of engagement with information technology and the digital," where the lab is "set up to support work with technology as a tool, an object of study, an exploratory laboratory, an expressive medium and an activist venue" (ibid., np). These multi-faceted aspects of HUMlab as a technological space are important both in its physical and digital existences—in its physical existence, it provides a structured place for hardware, screenscapes and smart teaching and lecturing platforms; as a digital space it lends access to software and hosts space in virtual worlds, in which exploration as constructive play and multiple literacies is encouraged. In both kinds of spaces, HUMlab emphasizes its collaborative and experimental ethos akin to a studio—a physical and digital playground.

In these respects, HUMlab's ethos of play, experimentation, and collaboration leads to its primary pedagogical principles of making and creating, and, in turn, the induction of learning in those processes. Learning by making is an essentially phenomenological stance, long argued by educational thinkers such as Friedrich Fröebel (1826), John Dewey (1934), and Rabindranath Tagore (see O'Connell 2002) for such pedagogical approaches of interaction, activity, and play. Stipulating learning by our bodies and the interactive experiences of our bodies with the world, these methods not only encourage deeper learning and more critical thinking but also promote social skills, empathy, and imagination –important abilities for becoming fuller human beings and global citizens (Nussbaum 2010). More recently these ideas have also been echoed in contemporary learning models, such as those proposed by Duffy and Jonassen (1992), which emphasize the importance of context, and the situated learning models of Bransford and colleagues (2000).

In particular, HUMlab harnesses these ideas of pedagogy by situating its taught courses in a physical space which functions collectively as a 21st-century physical classroom, where computers and other technological facilities are relatively easy to access, as well as in digital spaces where experimentation, collaboration, and exploration are encouraged. With respect to the latter, Second Life is the primary tool used for such digital-making, including machinima. Described by a popular commentator as "an instant messaging system, a software-coding environment, a design platform for 3-D architecture, an online community, and, conceivably, the germ of the next generation of computer operating systems" (Ellis 2007, np), HUMlab in particular uses Second Life's aspects of communication, virtual environment, and building elements to facilitate the conditions for learning across numerous competencies. Students create images, virtual objects, galleries for exhibition, and, of course, machinima in Second Life and integrate them as part of their course work. In this sense, the physical and digital existences of HUMlab coalesce into a collaborative, cross-reality learning space that is simultaneously classroom and laboratory, combining all the pedagogical principles of play, experimentation, collaboration, and exploration. As Svensson (2010) writes: "When museology and culture analysis students at Umeå build exhibitions in Second Life and produce machinima films, *the digital space is used as a laboratory* that enables enactments and experimentation that would be quite difficult to facilitate in physical space" (np; emphasis added). In that sense, the simulative "realness" of digital spaces is grafted onto learning not to compensate for a lack of physicality but to empower by providing additional resources and modalities for creative acts to allow for critical consideration as a result of the act of making. The question, then, is: How may the value of craft in machinima, as discussed above, contribute to that learning? We

discuss this by examining in the following section the case study of teaching a Cultural Analysis course component with machinima.

Teaching Cultural Analysis with machinima

"Kulturanalysprogrammet" (The Cultural Analysis program) is an undergraduate course taught by the Department of Culture and Media of Umeå University, focusing on how normative roles are assigned and mediated in culture according to hegemonic discourse, including gender, generation, age, class, family, occupation, sexuality, religion, and ethnicity. In the Fall term of 2009 to 2010, the course, undertaken at the time by ten second-year students, was redesigned to include a component on digital culture and theory to be taught in HUMlab as a complement to the cultural studies theory taught, in turn, by the department faculty. The main project for assessment for that component was set as a machinima film of no more than ten minutes in length (to allow for online upload) to be made in Second Life, where HUMlab manages two islands, one of which was being used by a course on museum studies at the same time.

The course was designed to progress in two stages. The first was an induction stage, where the students, divided randomly into three groups of three to four, were introduced to the HUMlab Second Life island and instructed on being in the virtual world. They were taught all the basics—opening an account, creating, controlling, and caring for an avatar, and navigating the virtual world—as well as more advanced modalities, such as socializing in the virtual space, controlling an inworld camera, documenting onscreen events, editing, and post-production machinima work.

The second stage, then, was to gather their material for the films, specifically in light of the cultural theory they had covered earlier in the course. Here is where the exploratory ethos of teaching in HUMlab becomes self-reflexive, as the course takes its own organic, unexpected turn. The initial attraction of using Second Life for this course component was the access it could provide, as an immense digital social complex, to people, groups, cultures, and their media. Hundreds of thousands of people from all over the world were in Second Life between 2007 and 2009, when its popularity was at an alltime high. In view of that, the course directors expected the students to take on the virtual world as a research field, and to gather, document, and analyze the stories of other avatars they meet in this vast social virtual space. However, for reasons still not entirely clear, the students embraced, instead, the roles, behaviors, activities, expressions, and play that can be achieved in Second

Life as a tool. Rather than seeing the vast array of islands, towns, buildings, and streets as interconnected places inhabited by avatars controlled by users all over the world, the students saw a world as a virtual sandbox in which they could create their own rhetoric, fiction, and narrative.

This turn, while unexpected, was not unwelcomed—the pedagogical principle, after all, was not in any form of fixed prescription, but in the exploration of learned theory. The students thus began to storyboard, script, design, build, film, and edit using Second Life. Once scripts and storyboards were approved through seminar discussions, the students created avatars for the characters. Avatar bodies were dexterously designed in all forms and ethnicities, including the fashioning of clothes, hair, and skin. Alongside the bodies of avatars, props and sets—including a military base, a New York thoroughfare, an old American West town, a Starbucks café, a nightclub, an opulent mansion, a university lecture hall, a corporate office, and an aircraft—were scouted and chosen. Scenes were shot using three to five computers at any one time, and coordinated by students yelling across the lab to each other while avatars were maneuvered inworld, some as virtual avatar cameras, others as actors within camera frames. Sound production followed filming, with voices recorded, edited, and then matched to visuals, along with music and sound effects. Finally, titles and credits were added. The entire process took four months, resulting in three machinima films[O, P, Q] which presented critical portrayals of the social normative in relation to various cultural themes covered in their course.

We see four critical elements of craft involved in the production of these machinima films, elements that we argue also contribute to enhanced learning. The first is, of course, the sheer dexterity of the processes involved—the crafting of avatars, the arrangement of sets, costumes, camera perspectives, and movements, all of which demand specific skill sets and knowledge not taught in a conventional humanities classroom. These include not only the technical skills of coordination and reflexive control involved in making the films, but also the skills of teamwork (collaboration, synchronization) needed to make them together as a randomly assigned group working in cross-media spaces. Craftwork involved in these machinima is also shown in the students' technical aptitude, where image creation and manipulation, graphic and spatial composition, model-making abilities, writing skills (including coding), filmmaking skills, audio production skills, and post-production knowledge and experience were demonstrated, often developed from little or no previous experience.

Second, the students also demonstrated creativity in making the films, employing wit and subversion, particularly in playing with the nature of the media. As an example of creative transmediality, the students, in one of the

machinima works, *Another Love Story* (2010),[Q] included actual video footage of their hometown Umeå to signify a place of tolerance and diversity, spliced with the same shot composition in the corresponding virtual space with a sound cut using the roar of a plane engine and a Scandinavian Airways landing announcement. In making these films, students went beyond what is pedagogically possible in standard essays or oral presentations. Creating machinima, in its combined use of coding, model-making, composition, design, architecture, fashion, audio, voice performance and production, audio design, set design, and film technique, propels students into a learning experience that is not only impossible to achieve in the standard humanities classroom (i.e. one without the technological possibilities), but also beyond conventional writing and presentation skills. Instead, students use multimedia literacies—including writing and presenting—to create media artifacts which demonstrate a theoretical understanding of their course work. In the process, they subvert conventional learning outcomes (i.e. pass/fail), instead showing and enhancing their understanding and learning by using alternatively creative and playful strategies with unexpected but positive outcomes.

Third, these student machinima films manifest craftwork in the creating of meaning from digital objects. Due to the simulative nature of virtual worlds, the making of machinima involves taking elements from the worlds and fashioning them into meaningful artifacts. In particular, such simulation draws on the spatio-temporal realities of the virtual space, created by "the meeting with and collaborations among 'real' people (albeit as themselves or having alternate personas) and the creation of a place which acts as a unified spatial interface for such meetings" (Panichi *et al.* 2010, 166). The act of creating digital artifacts, with their own contours and nuances, thus becomes a deliberate mechanism for making meaning. Indeed, this forms an essential part of the course in terms of developing the ability to craft objects as the means to express ideas and arguments (in this case, as related to gender, sexuality, and other themes relevant to their course). For example, the students created an avatar in the machinima, *Gud och Hela Nation* (God and the Nation) (2010),[Q] to transmit meaning via a deliberately crafted masculine body—possessing of large shoulders, small waist, body hair, and high muscle definition—which they implicated in a storyline where that avatar becomes involved in a homosexual act. This masculine body, in turn, becomes the subject of sexual identity, where it is questioned and reassessed in the rhetoric of the film. In so doing, the avatar in both the virtual world and machinima film develops an argument for tolerance and multiplicity, while at the same time pointing out relevant stereotypes related to gender and sexuality.

Finally, we see craftwork in the machinima films in terms of the audience's recognition, which removes the object from the everyday and makes it an

artifact of aesthetic attention. The vernissage for the machinima premiéres was conducted on January 21, 2010 in HUMlab,[R] with an attendance of over 60 staff members, students, and visitors, and between 100 and 230 online views for each film at the time of writing. With an audience, the film becomes a media object, a representation of a place within the virtual world as well as an articulation of ideas, images, sentiments, and expressions concerning the subjects of the films. On this understanding, the knowledge involved in the craftwork of machinima encompasses not only its technical know-how but also the specialist knowledge inherent in its content and formation. The particular theoretical ideas explored and analyzed in a term project become a creative performance of knowledge with an audience and a product that may be shared. That knowledge comes into play in the spectatorship of these particular machinima, lifting the film from mediation and spectacle (often associated with digital media and particularly videogames) to specialist information which is arguably part of its craft.

In these ways—the dexterity of technical skills, the fashioning of artifacts, the creation of meaning, the existence of an audience—the work of craft emerges from the experiences of the students in HUMlab. In particular, the acts of creation in such work offer space, modalities, and learning opportunities for unique critique and skills formation that comes from the mediation of machinima as media artifact. These again tie back to HUMlab's pedagogical ethos of learning by making and creating: to learn, see, and think about the world differently through making something, not just with our hands (and eyes and fingers) but also as interactive experiences between physical and digital realities.

Conclusion

Posing the question, "what is machinima," Hugh Hancock and Johnny Ingram (2007) answer themselves: "It's a philosophy, a fervent belief, a technique, and, last of all, a technology" (1). It is an entirely appropriate response, with all of the named aspects applicable to our case here: machinima as a philosophy (taking advantage of existing technologies); a belief (anyone can do this); a technique (control your avatars properly); and a technology (HUMlab and the critical making of digital humanities). Daniel Pink (2005) prophesizes what he describes as a cultural transition in our era, from an "Age of Information" to an alleged "Age of Conception," implying a concomitant transition of information processing from accumulation to creativity. Yet, a systematic activation of that creativity remains a difficult, if at all possible, achievement. Originality,

inspiration, and expansion of the human experience through creativity are by their very nature unformulated.

However, we have argued in this chapter for the merits of digital-making, principally from the perspectives of pedagogy and of shaping better approaches for teaching and learning, which we also argue may be conducive to sparking inspiration, or as close as one can get to that elusive process. There just may be one more aspect to that magic of creativity which could come from this community of machinima craftsmen and women, and that lies in their sending to us images, stories, and myths of what they are building and creating inside vast game and virtual worlds.

Notes

1 This statement comes from an employer at a large Indian firm who laments that his younger employees "are all becoming spreadsheet wizards at banks" (*The Economist* 2011a, np).

2 Although this is being increasingly qualified with machinima-specific software such as *The Movies* (2005) and *Moviestorm* (2008), and with embedded machinima software in games such as *Halo* (2001–present).

3 This is not to say that computer-generated imagery (CGI) may not constitute craft, but that would be an argument to be made in another essay.

4 The workshop was titled "The Art and Practice of Machinima: Filmmaking with Graphics Rendering Engines," held on November 18, 2010 in HUMlab, Umeå University, Sweden. See http://admin.humlab.umu.se/node/1333 (accessed September 12, 2012).

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Agency, simulation, gamification, machinima

An interview with Isabelle Arvers

Jenna Ng

I looked up Isabelle when I was visiting Paris for a weekend, having already known a little of her interests in and read her published articles on machinima. As Isabelle filled me in on her numerous projects curating, exhibiting, and teaching with machinima, I grew increasingly fascinated with her work and initially wanted her to document her projects as a chapter for this collection. Her work with machinima presented yet more perspectives on how it may be and has been used. Yet, upon reading her first draft, I felt such documentation robbed her projects of their essential dynamism—prose reportage could not capture the exhilaration with which she experimented, played with, and explored machinima. Essentially, I felt the only way was to re-enact the conversation we had in Paris, but by then I had returned to Cambridge, Isabelle was back in Marseilles, and neither of us had travel plans to cross each other's paths again soon. The solution was obvious: we would

meet and talk in Second Life and film the conversation, at the same time, as a self-reflexive machinima[A]*—machinima about machinima—taking form simultaneously as documentation and presentation. The edited transcript of the interview, conducted on March 1, 2012, is as follows, covering some of Isabelle's recent involvement with machinima in France and her gauge of their success.*

Jenna (J): Hi, My name is Nicky Varnish and we are here in Second Life at UCSville. I have with me Isabelle Arvers for a chat about machinima for the volume *Understanding Machinima*, to be published by Bloomsbury. Isabelle has been involved in machinima on numerous levels—as curator, critic, analyst, artist, trainer, and teacher. Great to have you here.

Isabelle (I): Thank you. Hello.

J: I want to talk about some of the more high-profile events you have been organizing with machinima recently, such as machinima workshops in 2010 for teenagers across France.[B] What were you trying to achieve in organizing these workshops for them?

I: Yes, actually as a curator I showed a little of machinima programs everywhere in France. But most of the films I was showing were in English. I don't mean that there is no machinima scene in France, but it is still very underground. So my first aim was to organize these machinima workshops to democratize this movement and to develop this way of expression in France. Also, the second aim for why I wanted to make these machinima workshops was that I realized in 2005, during the riots in France, there was a young guy who decided to give his point of view using a machinima. The name of this machinima is *The French Democracy*[C] by Alex Chan and this movie made me understand that machinima can be seen as a way of expression and also as a way to give a voice to those who can't speak or don't have a voice inside the media. So that is why I also wanted to develop this movement in the suburbs to create another way of expression. And to show that games are not only a mass consumption object, but also a way to produce context.

J: Yes, that was a really famous machinima film and I think *The French Democracy* made a huge impact not just with teenagers but also with ethnic minorities. The response with this machinima really touched a nerve. Do you think there is anything particular to this medium that will cause these teenagers to respond to machinima, to these workshops, or to this medium in particular?

I: Yes, actually they were very enthusiastic. What I saw mostly was pleasure: a pleasure to create avatars, a pleasure to create scenes, and also to direct the virtual actors. Of course, it depends on their age. They did not really divert the tool: they used a machinima software to create a machinima. But what was interesting is the relationship between creating an avatar that is perhaps far from their identity, then recording their voices, and then putting their voices on their avatars, because it allowed them to talk about their lives, their experiences, but with this very special relationship to their avatar identity. Also they were surprised by the fact that they can tell a story with a game. But the thing is that, in games, when the gameplay is not very good, you always know what is going to be after. What they like with machinima is that *they* decide what is going to be after, what is the next step, what is the next move. They decide the story.

J: Yes, I think that is very powerful, this idea of agency, and I think that is a very crucial part of machinima—being able to use the game and the game engine to create your own narrative. Do you see that as the main advantage of teaching machinima to these kids? The idea of agency, of being able to see opportunities in gameplay, of being able to forge your own identity in terms of your avatar, your appearance, your voice? Do you see that as a major effect or advantage of this medium?

I: I think it is important. They use games a lot—the first as entertainment in France. They use it a lot and it is nice to be able to help them to understand how a game is built, and that games in development can be an opportunity, as a job, for example—I also wanted to show them that from making machinima some people found jobs not only in the gaming industry, but also in the cinema industry. Machinima-makers were hired to create cinematics in the game industry. So the purpose is also that: to show that there are some possibilities with games. It is not only a way to consume. And what is interesting is that they use video platforms every day. They play every day. So I wanted to show them the links between their daily occupations and what they could produce. The other thing is also to show them how to collaborate inside a team. Because, when you are young, you are not really used to collaborating in a team. So it is quite good to show it.

J: Moving on from the workshop for teenagers, I understand you also do machinima events for adults or for the gaming industry, specifically in June 2011, when you were invited by this non-profit organization called "Design the Future Now"[D] to participate in an event called

"Open Crea," which is basically to get creative people from the gaming, communication, and marketing industries to think about and experiment with new trends in communication and marketing. I think that sounded incredibly interesting, particularly when you told me how you then designed this game prototype, called "ID Lab," during which you have your guests select skills and tools to create an effective communication strategy for a given scenario.[E] I understand the scenario for that evening was communicating eco-friendly means of transportation in Marseilles and the tool you used, of course, was machinima. Tell me a little about the machinima that was the end result of that event.

I: You have to imagine that people were eating and drinking while they were giving me some directions to create this machinima. The idea was to speak about eco-friendly means of transportation in Marseilles. You have to know that you have hills in Marseilles and people prefer to often to put their bicycles down inside the city rather than on top of the hills. So the idea of this movie was to teach tourists that, if they returned their bicycle in the top of the city, they can win points and then they can rent a bicycle for free. So that was the very little story behind the machinima and the scene that we directed live for this "Open Crea." We told the story of a Belgian tourist who wants to return his bicycle and he is a bit aggressive. But someone comes to him and tells him what he should do if he wants to get points and rent a bicycle for free in Marseilles.

J: How many people were involved in making this machinima and what program did you make it with?

I: You have to imagine that this whole event happened in three hours. The game, "ID Lab," was to create the strategy: groups were created in order to define some strategies, and then we had this machinima direction and we only had one hour left so it was quite quick. We had 10 to 15 persons and they were drinking, eating, and telling me, "put some more trash because we cannot really realize we are in Marseilles," or "put a red nose to the Belgian guy" because, of course, we had some jokes about Belgian people. But anyway … I used *MovieStorm* because it was easy to use and easy to make something in a very short time, even if the graphic design is a bit too much like *The Sims*, but for this kind of time constraint it was good to use something like that. It was also a way to mix theory, marketing strategy, and game in a kind of party-time atmosphere. You know, we are working, but we are doing something else and we are having fun—that was the main purpose.

J: I think the most fascinating part of this exercise that you have just described is the idea that this is all taking place in a cocktail party. People are drinking, there is that very nice blend of work and fun and socializing and creativity as well. I think it is extremely fresh.

I: Yes, we could have done a movie or a short film, but it wouldn't have been the same because people were inside the movie-making but also outside at the same time, so it remained fun.

J: That is really interesting. There is a certain edge as well from the machinima and the avatar, and that connection, that slippage between the physical and the virtual world. So what do you think were the most valuable lessons in this exercise, or skills which they took with them?

I: I think that when we need to conceive a strategy, we always have a lot of ideas about means, techniques, but then when you have to make it concrete, when you have to visualize, I think machinima really helps the people to simulate, to make a simulation of their ideas and to see if it is really possible. So for this experience machinima was used more as a simulation tool to see if your ideas are good, if it can be realized or not, I would say. And then what was interesting also, though you don't need a machinima for that especially, was this collective thinking aspect. Because, for the "ID Lab" game, we separated people into teams, trying to create teams with complementary skills. So many people trying to create the story live and to design the scene live. This collective thinking was an interesting part of it.

J: I think again machinima tends to be that sort of vehicle for collaboration and, as you say, collective thinking and as a tool for visualization. It is interesting how you have channelled these two ideas and these skills into your task, which was basically about communication and marketing strategies, in this particular event and in this sort of context—the cocktail party in a very industry-oriented scenario or situation. I think that is fascinating and I also know that you were inspired by the success of this and to use the same format as part of your pedagogy in teaching a course on web marketing in St. Raphael, France, right? But we will talk about that in the next section.

* * *

Jenna: We have talked about your machinima workshops for teenagers, and then we moved to "Open Crea," an event for industry people in games, communication, and marketing, and we also talked about the "ID Lab" prototype game, by which you were so inspired you decided

to use the same format to teach your course on web marketing at the University of Technology in St. Raphael in France.[F] I think that is a really interesting match—machinima and web marketing. Could you talk a bit about how you think this medium fits in with your course with web marketing? What were you trying to teach by using machinima for that?

Isabelle: When you speak about web marketing nowadays, you speak a lot about gamification, advergames [games made in Flash to create a "user experience" based on the values of the company/advertiser], social network, social games. So there is for me a very strong link between marketing and games nowadays. Also, when you talk about machinima, you talk about mash-ups or game diversions, and I think it can be linked to transmedia techniques that we use in marketing to tell stories and to keep clients. So I thought machinima could be a good way to visualize a marketing strategy for the students. Also, these students are not aiming to become managers—they are going to execute other people's ideas because they are going to be web developers or graphic designers, and often they don't have a global view of what they are doing. They are doing a 3D picture, or they are doing a website, or they are doing animation, but often they do not have a global view of what they are doing or using the tools for. So I thought for once that it could be nice to begin with ideas, like gamification, advergaming, and then to push them to imagine a marketing strategy using gamification techniques and then tell a story. Because we talk a lot about storytelling in marketing nowadays and, if you want people to buy, you have to tell them very seducing stories. So I wanted to have my students to make these particular ideas, to make them concrete and to tell a story to see if their ideas are good or realizable.

J: Yes, it is again the idea of using or manipulating or transplanting the concept of the game—as you say, gamification—into a communication strategy and into visualizing or putting together this whole interaction between web, print, physical, virtual space, mobile systems.

I: My students are often hard-core players and they play massive multi-player games, and I wanted to show them how nowadays marketers use the techniques that were born in these types of persistent games to create a community, to listen to the community, and then to give them the content that they want, and to make them participate and to make them recommend the game. So using a game engine to talk about game techniques, marketing techniques that are related to games, you know, it is like a *mise-en-abyme*.

J: I like that phrase. So how would you assess the course and how would you assess the value of machinima in teaching this course? Do you see it as a tool, or as a vehicle for something else? Do you see it as valuable in itself to teach skills inherent in making machinima?

I: For this course, I saw machinima more like a simulation tool than anything else. But also, I know that the students are learning 3D, they are learning animation. But they spend one year to make a bowl or move a square. I wanted to show them they have some very easy-to-use tools that are not taught at schools. You don't learn machinima in French schools. Perhaps the only school where you can learn machinima is Supinfogame—it's a gaming school and now we have some good machinima that comes from this school. But it is still very experimental, so what I hope is to be able to show the documentation of this experimentation and to show it as a new opportunity for universities. But still it is an experiment and I need to work on it.

J: Yes, we all do but the hope is there, the vision is there, and hopefully the will is there from our colleagues and other educators.

I: I am going to do it—the same course—again in 10 days. You know, it's experimental. I give my course about gamification and advergames in the morning and then we play the "ID Lab" game, then we work on my maps, then they shoot a machinima, and I hope the result will be less experimental and more interesting and that I will be able to communicate on it and show it to my colleagues.

J: Yes, spread the message! I look forward to having an update from you on how the repeat of this course goes.

I: The last time I did the machinima workshop was with an arts school [The Superior School of Arts] in Cambrai and the result was very different because the students diverted the machinima and did very original scenes. For example, they made a queer machinima: it begins with a male character who becomes a woman and then the same on the contrary. There were two installations. There was also a machinima using different layers of movies. They really diverted the idea of machinima, so it was a very different use of the tool.

J: Yes, there is obviously huge potential for this; this volume only scratches the surface. Thank you so much, Isabelle, for talking to me today.

I: Thank you.

Notes on contributors

Isabelle Arvers is a French media art curator, critic, and author, specializing in video and computer games, web animation, and digital cinema. She has coordinated ISEA 2000, Paris, and curated Video Cuts 2001, Centre Pompidou, Gaming Room Villette Numérique 2002, Paris, Tour of the Web 2003, Centre Pompidou, featuring French and international artists. Her field of investigation is at the crossroads of art, videogames, the internet, and new forms of network-related images and digital imaging, and she was among the first to speak and present at machinima festivals. She regularly gives workshops on machinima and is also a web jockey, playing live with online creation through the multiscreen environment WJ-S created in 2006 by Anne Roquigny.

James Barrett is an adjunct and PhD candidate in the Department of Language Studies at Umeå University in Sweden. Much of his work is conducted in HUMlab, a digital humanities lab and studio, where teaching, research, and creation are delivered under the umbrella of a multidisciplinary and high-tech meeting space. Barrett's PhD thesis is entitled "Narrative Freedom: Techniques for the Control of Reading in Four Works of Digital Literature," which examines how four digital literary works set up reading strategies and condition the reader as a subject. Barrett has published on narrative in transcultural and digital media contexts, with a particular interest in the concepts of reading and performance. Barrett also works with networks in digital art, virtual worlds, pedagogy that involves digital media, and digital culture. He also teaches cultural studies, literature, and narrative design in 2D and 3D media.

Graham Barwell is a very experienced teacher in humanities/social sciences. He has taught Chaucer for many years and has a particular interest in adaptations. He introduced the teaching of electronic publishing and digital culture at the University of Wollongong and continues to work in those areas, while being a pioneering and enthusiastic user of educational technology. Part of his research activity has been in the use of technology for scholarly purposes in the humanities and he has published widely in that field.

Sheldon Brown combines computer science research with vanguard cultural production. He is Director of the Arthur C. Clarke Center for Human Imagination at UCSD where he is a Professor of Visual Arts and a co-founder of the California Institute of Telecommunications and Information Technologies (Calit2). He is former Director of the Center for Research in Computing and the Arts (CRCA) and also UCSD Site Director of the NSF supported Industry–University Collaborative Research Center for Hybrid Multicore Computing Research.

William Brown is a Senior Lecturer in Film at the University of Roehampton, London. He has published various articles and book chapters on digital technology and cinema, and is the author of *Supercinema: Film Theory in the Digital Age* (Berghahn, forthcoming) and coeditor (with David Martin-Jones) of *Deleuze and Film* (Edinburgh University Press, 2012).

Chris Burke graduated from NYU Film School and went on to work on-set with directors such as Robert Altman and Lucio Fulci. Working as a composer, he has scored six independent feature films and had three CDs and several digital releases of original music. In the 1990s he started Bong + Dern, Inc., creating interactive audio projects for Bjork, MTV, and others. In late 2004 he created *This Spartan Life*. A talk show in "game space," *This Spartan Life* uses Xbox Live and the videogame *Halo* as its backdrop, and has been lauded for its brilliant combination of traditional filmmaking with the creative, interactive possibilities of videogame technology. Guests have included Malcolm McLaren, McKenzie Wark, game designer Katie Salen, the rock band OK Go, Bob Stein, and many others. *This Spartan Life* has attracted the attention of countless mainstream media outlets, including *Wired* magazine, who likened it to "a mash-up of The Charlie Rose Show and Doom," The BBC, Reuters, *Stuff* magazine, and *BusinessWeek*, and won Best Machinima Series at the 2005 and 2008 Machinima Festivals.

Paul Clifton is a PhD student in Digital Media researching tangible and embodied interaction and its effect on perception of space, both real and virtual. His previous research includes how tangible interfaces can facilitate interdisciplinary communication and their effects on perception of the body and creativity.

Sandra Danilovic is a doctoral student in Information Studies at University of Toronto, an award-winning documentary filmmaker and a media arts teacher based in Toronto, Canada. Her semi-autobiographical Machinima

documentary, *Second Bodies*, won Best Documentary at the New Media Film Festival in San Francisco in 2010. Her previous documentaries, *Portrait of a Street: The Soul and Spirit of College* and *Just Arrived*, were respectively broadcast on PBS and Rogers OMNI Television. Her research focus is in inclusive game design and game/avatar studies.

Joseph DeLappe is a Professor in the Department of Art at the University of Nevada where he directs the Digital Media program. Working with electronic and new media since 1983, his work in online gaming performance and electromechanical installation has been shown throughout the United States and abroad. In 2006 he began a project, *dead-in-iraq*, to type consecutively all the names of America's military casualties from the war in Iraq into the American Army's first-person shooter online recruiting game. He created and directs the crowdsourced memorial project, iraqimemorial.org. He has been interviewed on CNN, NPR, CBC, the Australian Broadcasting Corporation, and on The Rachel Maddow Show. His works have been featured in the *New York Times*, the *Australian Morning Herald*, *Art in America*, and in numerous books and articles exploring the convergence of art, gaming, and activism.

Lisbeth Frølunde, PhD, is an Assistant Professor in New Media at Roskilde University, Denmark. She has just written "Animated War" for *Convergence* (February 2012), and "Machinima Filmmaking as Culture in Practice: Dialogical Processes of Remix" in the *Computer Games and New Media Cultures* anthology (2012) and co-authored "Interests in Motion: The Film Medium through the Eyes and Lenses of Young Scandinavian Filmmakers" in the *International Perspectives on Youth Media* anthology (2011). Her doctoral thesis was an empirical study of how teenagers design animated films. Her main research interests are film and multi-media production, media literacy, visual culture, and socio-linguistics. Her background includes illustration, design, and concept development (such as games, software, toys).

Sarah Higley, Professor of English at the University of Rochester, NY, teaches medieval northern vernacular literature, cultural studies, film studies, and virtual worlds and machinima. She has published diversely. After her first book on Old English and Early Welsh poetry, she co-edited a collection of essays on *The Blair Witch Project* with Jeffrey Andrew Weinstock (*Nothing That Is: Millennial Cinema and the Blair Witch Controversies* (Detroit: Wayne State University Press, 2004). Her latest book, *Hildegard of Bingen's Unknown Language: An Edition, Translation and Discussion* (New York: Palgrave-Macmillan, 2007), puts the "Lingua Ignota" in context with other invented languages. As "Sally Caves," she has published short fiction, as well

as the teleplay "Hollow Pursuits," which aired in the third season of *Star Trek: The Next Generation* (1991) about the dangers of the holodeck. It was ironically prophetic: for the past two years she has made over 25 machinima in Second Life, two of them attempts to merge her interest in the medieval with her interest in the stylized presentation of text and image in an "Otherworld."

Larissa Hjorth is an artist, digital ethnographer, and Associate Professor in the Games Programs, School of Media & Communication, RMIT University. Since 2000 she has been researching and publishing on gendered customizing of mobile, social and gaming communities in the Asia-Pacific—these studies are outlined in her book, *Mobile Media in the Asia-Pacific* (Abingdon: Routledge). She has co-edited three Routledge anthologies: *Gaming Cultures and Place in the Asia-Pacific region* (with Dean Chan, 2009), *Mobile Technologies: From Telecommunication to Media* (with Gerard Goggin, 2009), and *Studying the iPhone: Cultural Technologies, Mobile Communication, and the iPhone* (with Jean Burgess and Ingrid Richardson, 2012), and in 2010 she released *Games & Gaming* (London: Berg). Contact larissa.hjorth@rmit.edu.au.

Matthew Holtmeier is a PhD candidate at the University of St. Andrews where he is completing his thesis titled "The Modern Political Cinema: Biopolitical Production and Cinematic Subjectivity." More information on his publications may be found at www.matthewholtmeier.com.

Elizabeth LaPensée addresses indigenous determination in media such as games, films, animation, and web comics. She draws on her Irish, Anishinaabe, and Métis heritage to inspire works such as her web comic *The West Was Lost* (2008) and experimental animation *The Path Without End* (2011). She is currently completing a dissertation in Interactive Arts and Technology at Simon Fraser University in Vancouver, British Columbia, looking at oral storytelling to inform the design of digital games.

Jason Edward Lewis is a digital media artist, poet, and software designer. He founded Obx Laboratory for Experimental Media, where he directs research/creation projects devising new means of creating and reading digital texts, developing systems for creative use of mobile technology, and using virtual environments to assist Aboriginal communities in preserving, interpreting, and communicating cultural histories. He is committed to developing intriguing new forms of expression by working on conceptual, creative, and technical levels simultaneously. His creative work has been featured at the Ars Electronica Center, ISEA, SIGGRAPH, Urban Screens, and Mobilefest, among other venues, his writing about new media has been presented at conferences,

festivals, and exhibitions on four continents, and he has won awards from the Electronic Literature Organization (ELO), Ars Electronica, and the imagineNative Festival. He is currently an Associate Professor of Computation Arts at Concordia University in Montreal. Contact www.obxlabs.net.

Henry Lowood is Curator for History of Science and Technology collections and Film and Media collections at Stanford University. He is also a Lecturer in the Thinking Matters Program, the Science and Technology Studies Program, and the History and Philosophy of Science Program. Since 2000, he has led How They Got Game, a research and archival preservation project devoted to the history of digital games and simulations. This project includes Stanford's contribution to a multi-university, interdisciplinary project called Preserving Virtual Worlds, funded by the U.S. Library of Congress and the Institute of Museum and Library Services. His most recent publication is *The Machinima Reader*, published by the MIT Press and co-edited with Michael Nitsche.

Ali Mazalek is an Associate Professor of Digital Media at the Georgia Institute of Technology, where she founded and directs the Synaesthetic Media Lab. Her research explores emerging modalities in new media, focusing on how tangible and embodied interaction technologies can support creative practices in both arts and science disciplines. She received her MS and PhD from the MIT Media Lab where she worked with the Tangible Media and Interactive Cinema/Media Fabrics research groups. She received a BS in computer science and mathematics from the University of Toronto.

Christopher Moore is a gamer and Lecturer in Media and Communication at Deakin University, Melbourne. His published research interests include the appropriative practices of gamer subcultures and issues of videogames and creativity, identity, intellectual property, and technological obsolescence. Currently exploring the role of affect in online games, he is investigating the construction of gamer persona across multiple social and digital media networks, and he is a co-editor of the blog and forthcoming collected edition, *Zombies in the Academy* (http://zombieacademy.wordpress.com/).

Jenna Ng first trained as a finance lawyer in Singapore and London before switching to film studies, in which she was awarded a PhD from University College London (UCL). She is currently Anniversary Research Lecturer in Film and Interactive Media at the University of York. She is primarily interested in the cultures and theories of digital media, particularly in relation to imaging technologies, but she has also published work on other topics such as cinephilia, cinema and time, and East Asian cinema.

Michael Nitsche works as Associate Professor in Digital Media at the Georgia Institute of Technology where he teaches mainly on issues of hybrid spaces and performance as interaction. He is fascinated by the intersection of the digital with the physical and explores this borderline in videogames, mobile technology, and digital performances. He directs the Digital World and Image Group and is involved with various interdisciplinary research centers. He has contributed to numerous journals and conferences, and his books, *Video Game Spaces* (Cambridge, 2009) and *The Machinima Reader* (Cambridge, 2011) (co-edited with Henry Lowood), were published by the MIT Press.

Glossary

Avatar: The point of embodied awareness in virtual space is referred to as the avatar. It can take on two- or three-dimensional form, and in so-called third-person perspective it is possible to see your avatar as you negotiate the virtual space. However, many first-person shooter games will only feature the hand or weapon/s the avatar is carrying.

Boundary: Boundaries lie between parcels, regions, islands, and Sims. They determine many attributes of a space in virtual worlds as they represent divisions between servers inside the virtual world.

Build: A build is the term used to refer to a work of construction within a virtual world. A build can be a single structure or an entire city if it is recognized as being a single project. A theme, a creator or a team of creators, or the boundaries it is framed by can unite a build. Many famous "builds" are discussed and critiqued by critics and fans of virtual architecture.

Capture the flag: An ancient game structure where an objective is set in competition, often between teams over terrain. Teams take on roles as attackers and defenders. In virtual environments, the objective can be an object, a building, a device, a person, or a feature of a landscape. Opposing team members can be captured or, in virtual play, killed. The winner is the team that captures "the flag" and attains the objective. Capture the flag is a common structure for action in first-person shooter games.

Estate manager: An estate manager manages the daily activities and developments that occur on a Sim in Second Life. The duties of the estate manager can range from evicting squatters to setting up media streams, building houses or exhibition spaces, terraforming (transforming the land), negotiating in disputes between residents, organizing payments for land sales, or for the tiers on parcels (charges for hosting on the Linden Lab server). The estate manager has executive powers on the Sim, and can ban residents, grant land, or give extra powers to others.

First-person shooter: A dominant form in early and middle period videogames in the 1990s. The first-person shooter positions the player in relation to the virtual space of the game according to an embodied agent that can appear as a three-dimensional figure, or part thereof. The embodied agent can be simply a point of view, usually from standard head height through the two eyes (stereoscopic vision with an infinite depth of focus and 90-degree peripheral vision) of the main protagonist in the game (i.e. the player acting through the avatar). Countless first-person

shooters have been and continue to be produced.

Inworld: To be inworld is to be within the space of the virtual world. Things happen "inworld," or people meet "inworld." The term inworld can be related to the concept of the magic circle. Once you are inworld you are somehow separate from daily life on some basic levels.

Island (Second Life): There are four types of land regions (or a sim) in Second Life: Mainland, Private Region, Homestead, and Openspace. Mainland regions form one continuous land mass, while Private Regions are islands. The owners of a Private Region enjoy access to some additional controls that are not available to Mainland owners; for example, they have a greater ability to alter the shape of the land. It was once possible to fly between islands, but now people have to teleport due to the tens of thousands of islands that fill the world.

Magic circle: The magic circle is a concept taken from the work of the influential Dutch game theorist Johan Huizinga (1872–1945). Huizinga elaborated on the idea that "all play moves and has its being within a play-ground marked off beforehand either materially or ideally, deliberately or as a matter of course" in what are "temporary worlds within the ordinary world, dedicated to the performance of an act apart" (Johan Huizinga, 1995, *Homo Ludens: A Study of the Play-element in Culture*, Boston, MA: The Beacon Press, p. 10).

Parcel (Second Life): A parcel is a result of the division of a Sim and contains its own mediastreaming channels and coordinates. Parcels can range in size from a few to thousands of square meters. They can also be bought, sold, and rented.

Prim: A prim (for Primitive) is the basic geometrical form from which all objects in Second Life and in other virtual worlds are composed. Prims come in the basic forms of cylinder, box, prism, sphere, torus, tube, ring, and a more advanced (i.e. multi-faceted) form called "a sculpted prim." Single prims are combined to make multi-part objects.

Second Life viewer: Second Life is a virtual world hosted on servers on the internet, but to be able to engage with it one needs to download and install a viewer. The viewer is similar in some ways to a web browser but with greater functionality. Along with the official Second Life viewer, there are a range of third-party viewers (such as Firestorm) which offer different ways of engaging the virtual world.

Sim (Second Life): A Sim (as in Simulated Region) is the basic unit of virtual space in Second Life, usually represented visually as on land; it can also be underwater or in the air. Every Sim measures 65,536m² in size.

Skin: Avatars are programmed virtual agents that can have identifying features. A skin is the program that can be applied to an avatar to alter its appearance. Skins can change the height, build, colors, textures, composition, hair, teeth, eyes, proportions, stance, and gait of an avatar. Skins can also be bought, sold, discarded, saved, and exchanged in virtual worlds. A good skin is a work of art.

String of Pearls: The so-called String of Pearls model for game narrative design segments the story into

distinct units, which are joined by a linear pathway. Within each "pearl" section, the player/reader/user has extreme agency over narrative development and is able to choose freely, but to move from one segment to the next there is a single path that requires a specific action or goal.

Teleport: In many virtual worlds, the best way to travel longer distances as an avatar is to teleport. When an avatar teleports, it simply disappears, the screen inside the viewer goes blank or sets up some transition visual, and then the avatar reappears at the destination.

User: The term "user" is often interchangeable with "player" or "reader" in relation to software and particularly interactive digital media. The user is the person responsible for the avatar. The split that occurs between the avatar and its human controller, who often identifies very strongly with the avatar, has raised questions of identity in virtual worlds.

Windlight: WindLight is the codename for Second Life's atmospheric rendering system that enhances skies, lighting, and other graphical aspects of the environment. The "WindLight" system is commonly used to render photographs and machinima to include such effects.

Work-around: Virtual worlds offer many solutions or possibilities to any single situation. The work-around is the ability to solve problems and create situations in virtual worlds by using alternative strategies or knowledge. Getting the right shot, making the automatons move in the correct way, and patching together a scene based on clever camera angles and movement are examples of work-arounds.

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