

# The Journal of Digital Media Association



# The Journal of the Inter- national Digital Media and Arts As- sociation

Copyright © 2009 by the International Digital Media  
& Arts Association (ISSN: 1554-0405). All Rights  
Reserved. No part of this publication may be produced  
in any form or by any means without permission in  
writing from iDMAa. Produced in the United States.

# Table of Contents

## Executive Editorial Board

Michael Niederman, [Executive Editor](#)  
Columbia College Chicago

Sharon Ross, [Associate Editor](#)  
Columbia College Chicago

Randall Hoyt, [Design Editor](#)  
University of Connecticut

Jeff Ritchie, [Assistant Editor](#)  
Lebanon Valley College, PA

Conrad Gleber, [Editor Emeritus](#)  
LaSalle University, PA

Ray Steele, [Executive Director](#)  
Ball State University, IN

## Editorial Advisory Board

Karla Berry  
[University of South Carolina](#)

Chris Blair  
[Union University, TN](#)

Jennifer Burg  
[Wake Forest University, NC](#)

Dena Eber  
[Bowling Green State University, OH](#)

David Ferguson  
[Ball State University, IN](#)

Michael Moshell  
[University of Central Florida](#)

James Oliverio  
[University of Florida](#)

Scott Olson  
[Minnesota State University](#)

Glenn Platt  
[Miami University of Ohio](#)

Gail Rubini  
[Florida State University](#)

Mat Rappaport  
[Columbia College Chicago](#)

Jeff Rutenbeck  
[Champlain College, VT](#)

Debra Schneiger  
[National University, CA](#)

Scott Shamp,  
[University of Georgia](#)

Ray Steele  
[Ball State University, IN](#)

### Submission Guidelines

Articles on digital media and art related topics are welcome at any time. An abstract of not more than one page should be submitted to the editor via e-mail (mniederman@colum.edu). Please include "iDMAa Journal Submission" in the subject line.

Upon review, authors will be advised of acceptance for submission. The Journal will include a section for invited and refereed articles. While length will vary from issue to issue due to themes, articles will generally be 1500 to 4000 words. Any author preferring a peer review will automatically have the submission considered for the refereed section of the Journal.

While the Journal will normally appear in electronic form (PDF), at least one print version will be published annually.

All new Journals evolve and the iDMAa Journal is no exception. Please refer to our web site [www.idmaa.org](http://www.idmaa.org) for updates.

### Subscriptions

Membership in iDMAa includes a subscription to the journal. See the web site ([www.idmaa.org](http://www.idmaa.org)) for details. The annual subscription rate for institutions is \$95 which covers access to the electronic version as well as two copies of the printed issues per year.

3 Introduction  
[Guest Editor, Tom Dowd](#)

15 Killer7 Punk[ed]: Authorship in commercial videogames  
[Nathaniel Berger](#)

17 Artistic Exploration in Game Development Education  
[Todd Emma](#)

25 Navigating the Gap: The Rhetoric of Digital Space and Interactive Narratives  
[Jeff Ritchie](#)

43 Categories of Machinima  
[Michael Nitsche](#)

# Introduction

I blame Ken St. Andre, Liz Danforth, and Mike Stackpole.<sup>1</sup>  
What and why for, you ask?

Let me explain. Back in the day, those three authors were responsible for, at least in part, the writing on a game called *Wasteland*.<sup>2</sup> For those not hip to the scene, *Wasteland* was a relatively early, text-driven computer game about exploration and survival in a post-atomic war future - the great-grandfather of the recent CRPG extravaganza *Fallout 3*, if you will.<sup>3</sup> Now, I played a good number of computer games back in those days, sequestered away with my Apple IIe in my parents' basement, embodying the stereotype, but *Wasteland* in particular stuck with me. Why does it haunt me?

They made me kill the dog.

Now, I suspect some of you are right here with me. I know that very often when I bring up *Wasteland* to those gamers of a particular age they immediately get that familiar haunted, damaged look and utter those troubling words with as near to a death-rattle as you can and still be standing up - "I had to kill the dog!" Let me explain the horror that some of us carry with us to this day to those spared of this burden.

In the game, you are part of a military combat team exploring strange goings on in the wasteland, travelling from survivor town to survivor town scavenging what you can and killing nasty mutated things that

<sup>1</sup> Stackpole blames Danforth, by the way, which I suspect might just be his early preparation for Judgment at the Pearly Gates. "Saint Peter - I swear! - she did it!" Peter, I suspect, will not be buying it either. Liz is just too nice to have done something this heinous...

<sup>2</sup> *Wasteland*, Interplay Production/Electronic Arts, 1988.

<sup>3</sup> *Fallout 3*, Bethesda Game Studios/Bethesda Softworks/ZeniMax Media, 2008.

## Tom Dowd

Tom Dowd (MA, Communication) is a 25-year veteran of the game design business, having been first published while still in high-school. He is one of the co-creators of the award-winning Shadowrun role-playing game, as well as writer/contributor to other role-playing titles and two novels. He was a developer at FASA Corporation, working on the Shadowrun, BattleTech, and EarthDawn game lines and joined the Microprose-FASA Corp joint venture FASA Interactive in the mid-90's where he was senior designer on the RTS computer game MechCommander. In 1999 he was the lead designer on the Microsoft/Day:1:Studios Xbox/Xbox-Live million+ selling release, MechAssault. His other computer game credits include Shadowrun games for the NES and Sega consoles, the MechWarrior 2 (Activision; PC) and MechWarrior 3 (Microprose; PC) game series, Axis & Allies: Iron Blitz (Hasbro; PC), Leisure Suit Larry: Magna Cum Laude (Vivendi Universal; PC, Xbox, PS2), and DuelMasters (Atari; PS2). He is currently the lead of Skotos Tech's online multiplayer text-based social/rpg game Castle Marrach and is a full-time instructor at Columbia College Chicago in the Interactive Arts and Media department teaching and building curriculum in their Game Design major.

try to eat you without even so much as a considerate mention that you look tasty. In one of these ramshackle towns that are somehow surviving with no apparent means of perpetuating sustenance (a couple of mutant chickens only go so far) there's this kid named Bobby. Bobby has a dog named Rex, and Rex means everything to Bobby. The dog is, in all this desolation, all the boy has.

One day while exploring the area around Bobby's town you enter a cave, and upon trying to leave you're confronted by Rex. But Rex has been bitten by something and is now rabid. And Rex will not let you pass.

I spent hours upon hours trying to figure out how to get past the dog. Nothing worked. Saved game after saved

## I had to kill the dog.

game. Reload after reload. Nothing worked. At about 2:30 AM (on a school night, no less...tsk tsk.) I came to the deeply saddening conclusion that there was only one thing I could do to get out of the cave.

I had to kill the dog.

Wasteland was a text-driven adventure game, so it wasn't just a simple mouse-click to kill the dog, no no. My choice to kill Rex wasn't some disconnected, remote-control point-and-click death, I had to spell it out plainly and precisely. This was my deed, my action. This was my responsibility and my fault. I had to kill the dog. Sometimes, no matter how hard you try, you have to kill the dog. Sometimes you cannot win. Sometimes you have to pick the lesser of two evils. Sometimes you have to kill the dog.

So, I killed the dog... but Bobby hated me. I'd killed his dog. Bobby didn't just hate me; he despised me with that soul-blackening anger that has turned many a good man (or boy) into a villain. Later, after some time has passed, Bobby hunted me down across the wasteland to enact his revenge. I had to kill him too.<sup>4</sup>

So, yea, I blame Ken and Liz and Mike.

But what does this all have to do with games and art and the themes of this journal that I am supposed to be intro-

<sup>4</sup> No, I didn't try as hard to save him as I tried to save Rex. Food for thought.

ducing? Everything, I hope. Sure, it was a narrative force, the kind that us high-falutin' authors sneer at (and use routinely), but I remember it clearly nearly twenty years later.<sup>5</sup> Isn't that what it's about? Isn't one of the keys to art that it changes you? That you bring it with you even after you've walked away from it?

I had to kill the dog. I remember that moment. As a creator, I aspire to the emotions of that moment.

Now, my art is not your art. I think we can establish objective criteria to determine if games – or any other medium – has artistic merit and elements, but the ultimate decision on whether or not something is Art lies with the beholder. Games overall are not Art, nor are all paintings Art, nor

all music. Some are, certainly. Culturally we define and redefine what "art" is constantly, but a true categorization of Art only ultimately gets applied to works that pass the test of time. The art of a generation is constantly lost and all but forgotten with the passing years. And I will not wade into that muddy river of "high Art" versus "low art" here and now.

Some argue that games need their *Citizen Kane* to show the world that the relationship between art and games is not like Mentos™ and Diet Coke™. Maybe that's true, but *Kane* isn't the film people think it was. It was only moderately successful with the public and the critics when it was

<sup>5</sup> Here's the weird thing... when sitting down to write this I described the events leading up the killing the dog as I remembered them. Then I figured I'd actually be like professional or something and check my facts. Silly me, since it turns out my memory was *wrong*. What do I remember? I remember the kid and the dog. I remember the kid following my character around asking questions and being all hero-worshipping of me. Then I remember returning to town one day and the Mayor telling me that Rex had gone rabid and had bitten Bobby. Bobby was going to die unless I did something, and fast. In fact, there were only a certain number of commands I could input before Bobby died. Ultimately, many saved games later, I had to kill the dog. And the town thanked me, and Bobby hated me. So, this memory – this strong memory – I have is wrong. What am I remembering? Some homage to the original found in *Fallout 1*? Is it some amalgamation of scenes and games? I'm not sure, but it is linked strongly and in many ways irrevocably with *Wasteland*, right or wrong. If you know, let me know and ruin it all for me.

released.<sup>6</sup> What it did do was influence contemporary and future filmmakers and convince them that films could be *different*, that films could be *more*. It was those filmmakers who later on pointed back at *Kane* and said "No, you missed it... That was when it changed." The point is that film didn't really have its *Citizen Kane*, so it's unreasonable to insist that's what games need.

What games need is heart and soul married to technique. We had, in my opinion, more heart and soul back in the day.<sup>7</sup> Games like *Trinity*, *Planetfall*, the aforementioned *Wasteland*, the adaption of Harlan Ellison's *I Have No Mouth and I Must Scream*, and others. I'll also pin the "So Close..." ribbon on games like *Blade Runner* and *Phantasmagoria 2: A Puzzle of Flesh*, but the point is that as the game industry transitioned to a visual/interaction dominated paradigm from a narrative/interaction directed one we lost some of that ability to stir and affect.<sup>8,9</sup> Sure, there are moments. Aeris' death in *Final Fantasy VII* deeply moved many players, but there was never even any illusion that you might be able to save her.<sup>10</sup> There have been others as well, many of them accepted collectively but I suspect an even more are privately noted. Interestingly, Darren Aronofsky (the writer/director of *Pi*, *Requiem for a Dream*, *The Fountain*, and others) was recently asked by the *New York Times* for his notable media/entertainment moment of 2008.<sup>11</sup> His response – wandering the recreated streets of his childhood stomping grounds of Coney Island and Brighton Beach, New York City in *Grand Theft Auto IV*.

Does that make *Grand Theft Auto IV* art? No, certainly not... but it shows that meaningful, that art, that gift of something unexpected you get to carry away with you, exists even in the most unexpected ways for Darren Aronofsky and perhaps others. And isn't that, really, the point?

### References

Gould, Emily. "Moments that Mattered," *New York Times Magazine*. November 21, 2008. (accessed November 30, 2008).

Kael, Pauline. *The Citizen Kane Book*. Boston: Little, Brown, 1971.

<sup>6</sup> Pauline Kael, *The Citizen Kane Book* (Boston: Little Brown, 1971). <sup>7</sup>

<sup>7</sup> Cue the groaning now... Remember, I did use the phrase "back in the day..." early on. You were warned.

<sup>8</sup> A wonderful example of how simple branching narrative can really work to create a dynamic plot and sense of real influence on events. The in-game events, and outcomes, of *Blade Runner* change significantly based on the decisions that player makes.

<sup>9</sup> Buy me a drink at a conference one day and I will explain this bit of madness...

<sup>10</sup> Spoiler Alert! Doh... too late.

<sup>11</sup> "Looking over Niko's shoulder up at the virtual parachute jump in *Grand Theft Auto IV*'s version of Coney Island, grabbing a dollar hot dog off the boardwalk to get my health back, then leaping into a bullet-hole-riddled Hummer and smashing through my childhood neighborhood, flying over sand dunes on Manhattan Beach and finally drowning in the sea off Brighton Beach. Thinking, Man, I wish they made this game when I was a teenager."

Emily Gould, "Moments That Mattered," *The New York Times Magazine* (November 21, 2008). [http://www.nytimes.com/2008/11/23/magazine/23Favorites-t.html?\\_r=2&ref=magazine](http://www.nytimes.com/2008/11/23/magazine/23Favorites-t.html?_r=2&ref=magazine). (November 30, 2008).

Keywords:  
authorial dialectic, control,  
power, self-reflection,  
staging, visuality

# Into the Pixel Exhibit



## Dan Proops's digital culture-inspired oil paintings

Nathaniel Berger came to Ohio University in 2006 with nearly a decade of educational information technology experience, spanning his lower and higher educational endeavors. He has worked professionally in the digital arena, producing interactive and static arts media, as well as having worked within local educational gaming scenes, helping to empower and enable others interested in the field. He specializes in interactive digital technologies research, working extensively with artists, businesses, educators, entrepreneurs, and students, developing objective specific solutions that both demonstrate the digital-centric and humanistic qualitative aspects of society.



He is currently active as the Operations Coordinator at Ohio University's Aesthetic Technologies Lab, continuing his explorative work with graduates and faculty within the domain of Fine Arts. He is also in his first year within the Masters of Arts (MA) in Art History program, focusing upon the emerging field of games and art. Outside of the academic and professional arena, He enjoys Shotokan karate, reading science fiction, playing videogames (under the handle of Berge,) and enjoying the company of his wonderfully supportive family. **London's Empire Gallery. The Creative Review Blog has a fascinating interview with Proops and more samples of his work. (Seen above, "76% Complete" and "The Girl with a Pearl Earring Censored." From the interview:**

I believe the influence of Cubist philosophy on the graphic user interface (ie operating systems like Windows' XP/Vista) has never been properly looked at. In

Wireless Network Log In

Operations ((+))


Network Log In

limar guide... Everything You Need t

View First Unread

Yesterday, 10:45 PM

**Kyas**  
Smash Child



Join Date: Jun 2008  
Location: Lewisville, Texas  
Posts: 87

Shared items

Notes

Friends' shared items

Add subscription

Show: updated - all

- art-research
- games-research (5)
- personal-research
- tech-research

Manage sub

# Killer7 Punk[ed]: Authorship in commercial video games

of Pikmin that Olimar utilizes. I decided to make my own comprehensive read what I know on the subject, I think you will agree that it is important in TECHNOLOGY for all you ADD folks out there. If there is anything DON'T HATE, CONTRIBUTE!

Elemental pikmin are capable of dealing damage of their element and are immune to their element. If a pikmin is attacked by an attack of their element, they will absorb the attack and outprioritize it. For instance, I have faired with a blue pikmin and absorbed the entire, charged watergun attack of a squirtle. Such attributes apply to all elemental pikmin. I have not done extensive testing on this (coming soon!).

Now, to the colors.

**Red Pikmin**  
Element: Fire  
Durability: Normal  
Important info: Red pikmin provide Olimar with the most powerful arial attacks. If you have ever KO'ed someone with an fair, you probably did it with a red pikmin.

**Blue Pikmin**  
Element: Water  
Durability: High  
Important info: Beyond compare to the throws of most other pikmin, the back and forward throws of blues will kill most opponents at around 115% on Final Destination. If you have one of these guys next in line, go for the grab range is the second longest of all pikmin. throw and bthrow are potential kill moves with blue pikmin, it's best to save both until you infining yourself to downthrow only until then. The

**Abstract**  
Electricity

This paper explores Capcom's Killer7 videogame through the focal points of control, staging, and visuality. It engages with the notion of the auteur through semiotics, psychoanalysis, and visual culture within the domain of contemporary commercial media. It addresses the importance of videogames as art, foregrounding authorship atop artistic self-reflection. Finally, situating this textual analysis through methodologies and theories acquired from art history and ludological practices, the paper argues that videogames are worthy of critical study through a multiplicity of domains and disciplines.

power, raw power. lightly wider than those of other pikmin, and a bunch of health to boot. The extra weight of purple pikmin also gives them the most powerful upthrow of any pikmin, a near match for the fthrow and bthrow of blue pikmin, KOing fresh at around 115% on most characters. Purple pikmin do not latch when thrown. instead, they become a high-priority



Videogames are distinctly authored artifacts. They are distinct from any other medium as they posit interactivity, reflexivity, & visuality above all else. Capcom's *Killer7* is one such artifact that exemplifies this positing of unique qualities, but it differs in how it implements common practices. *Killer7* relies upon authored techniques of Control, Staging, and Visuality to make its mark, and stand out from mediocrity of the medium. Within this consciousness, the reader is able to engage the dynamic relationship between players and authors.

*Killer7* is a commercial videogame. It was developed to sell to the consumer mass market; to be played in homes and to be entertaining. Commercialism does not forego artistic value, nor does it limit the ability to act upon us as works of fine art do. I suggest rather, that commercial videogames are primarily intended to bring a capital return upon the designers and publishers, and that this intention does not limit artistic value or validation.

With commercial gains in focus, Capcom positioned *Killer7* to be one of its biggest investment returns in years. Capcom –and to a lesser extent Nintendo– hyped *Killer7* to be the commercial answer to Take Two's *Grand Theft Auto* [GTA], and Konami's *Metal Gear Solid* [MGS] series. Not only did GTA3 and MGS2 each sell over eight million copies, but also it also definitively marked the commercial and media success of an entire gaming generation.<sup>1 2</sup> Games were big.

Capcom's *Killer7* was positioned to be part of its 'Fantastic Five', better known as *Killer7*, *Resident Evil 4*, *Viewtiful Joe*, *Product Number 03*, and *Dead Phoenix*.<sup>3</sup> All of these games were hyped up as mature, non-kiddy games that distinguished themselves from its platform's traditional demographic.<sup>4</sup> *Killer7* was hyped above the other new

1 Big Gaz, "Metal Gear Solid 3 Exclusive for Sony," *Gameplanet* (May 15, 2003). <http://old.gameplanet.co.nz/mag.dyn/Features/1751.html>. (March 14, 2008).

2 Piper Jaffray, "Second Annual London Consumer Conference," *Take-Two Interactive Software* (September 26, 2007). [http://www.corporateir.net/ireye/confLobby.zhtml?ticker=TTWO&item\\_id=1642557](http://www.corporateir.net/ireye/confLobby.zhtml?ticker=TTWO&item_id=1642557). (March 14, 2008).

3 IGN Staff, "Capcom's Fantastic Five," *IGN* (November 13, 2002). <http://cube.ign.com/articles/377/377330p1.html>. (October 27, 2007).

4 Robert Levine, "Reaching the Unreachables," *CNNMoney* (October 1, 2005). [http://money.cnn.com/magazines/business2/business2\\_archive/2005/10/01/8359280/index.htm](http://money.cnn.com/magazines/business2/business2_archive/2005/10/01/8359280/index.htm). (March 16, 2008).

game properties as the most mature, and the most violent, placing it against the GTA/MGS demographic.<sup>5</sup> *Killer7* was positioned to be everything these games embodied and more; through control, graphics, story, and violence. *Killer7* promised to engage with schizophrenia, terrorism, murder, sex and more.

*Killer7* was a direct break to the "kiddy" reputation that persisted upon the Nintendo GameCube.<sup>6</sup> It embodied everything a traditional Nintendo game would not, as Gamers and game culture frequently equated to Nintendo's games to kids games. Nintendo games were read as such because they posited simplistic controls, non-mature contexts, and cartoon-like visuals above all else, ensuring that players of all ages would be able to purchase and enjoy Mario, Zelda, Pikmin, and more. *Killer7* was Capcom's fiscal answer to GTA/MGS and to Nintendo's stigmatic "kiddy" reputation.

Being commercial does not make *Killer7* any less artistically valid. Commercial videogames are just as valid and ripe for study as game art –or fine art. Being commercial does not intrinsically remove the author, but rather it occludes it. As videogames are developed regularly with development teams consisting of dozens of people, many argue that the author is dead; but even this is still frequently argued to be the case with fine arts!<sup>7</sup> Yet today we still recognize Film to be art, we recognize Quentin Tarantino as an author. Commercialism, interactivity, and post modernity have not yet killed the author; the author now just takes on a new locale, and finding it requires interacting, playing.

To be crystal clear; *Killer7* is not an 'art game.' Its origin and destination is that of industry and of consumption; that of the *hyper-patron*.<sup>8</sup> The aims of *Killer7* were that of commercial origin and consumer reception, not from fine arts origin for fine arts reception. Yet still, fine arts are

5 From this point on, I refer to gamers solely as a male or masculine to better place him within the target demographic of *Killer7* and for ease of reading. Gamers are also female or feminine equally.

6 IGN Staff and Hiroyuki Kobayashi, "Interview: *Killer7*. How exactly do you play this game? Producer Hiroyuki Kobayashi explains...sort of," *IGN* (March, 7 2004). <http://cube.ign.com/articles/499/499432p1.htm>. (October 23, 2007).

7 Roland Barthes, "The Death of an Author," in *Image, Music, Text*. Transcript, Stephen Heath, (New York: Hill and Wang, 1977), 142-81.

8 The hyper-patron is a person who gives financial or other support to something [a cause, event, person, organization, or item,] while being overly energetic to the point of near unusualness or addiction. Look no further than many avid gamers.

mass market, enjoyed at homes, and are often entertaining; being commercial does not invalidate videogames as fine art.

Many have repeatedly addressed the importance of "videogames as art," but rather than regressing the topic to a binary, another compelling question arises; one that requires the foregrounding of authorship as opposed to the eternal self-reflection of art.<sup>9</sup> What is important is that we look upon the artifact, the videogame; we should look upon *Killer7*, not as viewers, and not solely as players, but as gamers.<sup>10</sup>

### Junction: Control

Videogames are played; not watched, not viewed, but experienced through interaction. Interaction by definition entails a pair; in order to reciprocate or influence the other or origin.<sup>11</sup> There is no interaction without a pair, nothing without a causal and effective. There is nothing without the game and the gamer.

Controls within videogames are the intersections between the game and the gamer. Controls determine how the game is interacted with; they entail the physical –and mental– tools utilized in the manipulation of avatars and of objects. Controls are the bridges between the man and machine.

*Grand Theft Auto* and *Metal Gear Solid* both helped to redefine and refine controls within videogames. Within their respective genres of 'sand-box' and 'action,' they facilitated the core processes of exploration and experience.<sup>12</sup> These two games raised the bar above and beyond what had been previously set, and so marked two distinctly defining control schemes.

*Grand Theft Auto* legitimized the 'sand-box' genre, making it possible for gamers to "go anywhere" and "do anything"

9 Roger Ebert, "Games vs. Art: Ebert vs. Barker," *Chicago Sun-Times* (June 21, 2007). <http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/20070721/COMMENTARY/0721001>. (November 6, 2007).

10 McKenzie Wark, "Agony," in *Gamer Theory*. (Cambridge, MA: Harvard University Press, 2007) 12 – 20.

11 "Interaction." *The New Oxford American Dictionary, Version 2.0*. 2005. Apple Inc.

12 Controls within videogames, like other media, are bound by conventions of genre. Each genre gains its own distinct control scheme, facilitating play and adaptation. The controls within videogames are bound genre specificities temporally, adopting or commenting upon implementations by other titles within its genre.

within its enormously crafted environments.<sup>13</sup> The distinct controls allow the gamer to, in essence, go anywhere and do anything. It allowed for six degrees of un-encumbered viewing freedom, empowering gamers to drive cars, fly helicopters, run from the police, shoot gangster style, and mug hookers from an ambiguous third person perspective. *Grand Theft Auto*'s controls freed the gamer from the character, allowing for a seemingly endless amount of actions and exploration to occur.

*Metal Gear Solid* expanded the 'action' genre akin to *GTA*'s influence, but instead of focusing upon the potential for more actions, it allows the gamer to better fill the role of the playable characters. The controls within *MGS* allow the gamer to control with precision the freedoms associated with the character; connecting the controls the characters' physical body limits - or a facsimile thereof. Actions here lay on a tactile plane, and with a visceral presence, requiring gamers to manage precise amounts of pressure and movement when applied to buttons and joysticks. Actions demand a heightened awareness of physical senses, intrinsically connecting the gamer to the character.

As *Killer7* was being hyped as the next big thing, the gaming media and hyper-patrons were already speculating and inquiring about the details. The media had drawn out the basic narrative and visual styles within *Killer7*. Interviews told of the seven distinct personalities of each killer, and that the *Killer7* [the personification] was one person. What they did not know was how *Killer7* was going to control, and so speculated based upon gameplay media, equating it to *MGS*; as the game similarly took place in over-the-shoulder and first-person perspectives. Hands-on media previews referred to the controls as "third-person" and "first person" but glossed over the details, de-emphasizing them altogether, and leaving gamers adrift to the world of media hype.<sup>14</sup>

Now take the traditional concept of control, and ignore it; hide it away. Replace controls with Control. No longer do the controls bridge between man and machine, it *is* the bridge. Control is the empowerment of the gamer, and of the game; control is power.

*Killer7* eschews the control schemes laid down before it. Not only does *Killer7* abruptly break from its primary commercial competition, but it completely foregoes traditional genre conventions as well. *Killer7* embodies Control as power, and empowerment. As *GTA* and *MGS* utilize

13 Eric Qualls, "Grand Theft Auto: San Andreas (Review)," *GamesFirst* (2004). <http://www.gamesfirst.com/index.php?id=188>. (March 14, 2008).

14 IGN Staff and Hiroyuki Kobayashi.

control to allow for more and enhanced interaction [cause or effect.] *Killer7* utilizes Control to force an experience; forcing interactions, limiting intuition. *Killer7*'s Control is both the cause and the effect; the gamer controls it and it controls the gamer.

On-Rails is the primary mode of Control for *Killer7*. Instead of allowing the gamer to go anywhere and do anything as in GTA and MGS, *Killer7* forces interactions within a narrow pathway. Gamers are not free to go wherever, nor do whatever they like, but are restrained to a linear pathway from which they encounter antagonistic forces, known as the Heaven Smile.

Videogames are constructed; they don't magically appear. Code does not write itself, visuals do not leap from the ethereal plane, and logic does not just exist. There is a force behind everything and a context from which it originates.

Power now lies not with the gamer, but with the game. Within *Killer7* the controls empower the game; the controls limit the gamer, and enact the narrative. The controls enact the will of *Killer7*'s protagonist [Harmon Smith] and antagonist [Kun Lau], as chess players moving their pawns across a predetermined board. This is Control.

Pawns are unable to move any direction but forward. They may not willingly move left, or right, nor are they able to act freely. Pawns serve the ultimate purpose of victory; being strategically placed and acted upon by another. They are the Controlled, and are not left to the devices of free will.

For if the gamer held free will he would surely run rampant, engaging the world of *Killer7*; exploring every nook and every cranny. No, in fact the gamer is under the power of Control, for if the gamer wants to serve a purpose –the purpose of reaching its destination, the purpose of victory over the opponent- he would need to pickup the controller and be subjected to the power of the game. The gamer does not have Control while on-rails; the game has Control.

First-Person-Perspective is *Killer7*'s secondary mode of Control. After the gamer is lead on-rails for enough time, he will encounter the Heaven Smile. Upon this moment the gamer is now empowered with Control, able to engage the zombie-like creature to progress. At this moment the gamer must –for the sake of his progress- enter the first person perspective and exert his natural tendencies.

From this perspective the gamer now has Control. He is able to be free, able to look around, take in the environments, and fill the traditional role of a gamer. Upon entrance into the body, the gamer is left solely with an aiming sight and a target; the gamer wields the power to kill. However, it is not soon after this first experience of freedom that the gamer is left with the knowledge and experience that he is no longer able to move his character.<sup>15</sup> Whenever he enters first person perspective, he is limited; he is only able to kill or be killed. The gamer is only left with the power to take life or fail at the game; fail at being a gamer.

*Killer7* redefines the idea of controls entirely, placing the game and gamer within the domain of Control, within power.<sup>16</sup> The gamer is limited to exert his natural tendencies; limited beneath the ever-present Control of the game. The game is limited in executing Control; limited by free will of the gamer. This paradox emerges as one of *Killer7*'s greatest strengths, simultaneously placing the gamer in the context of the guard and the inmate. The gamer is both controlling yet being controlled; he his all-powerful, yet powerless. This is *Killer7*'s Control.

<sup>15</sup> I refer to *Killer7*'s personas as characters as opposed to avatars to avoid semantic baggage. In the case of *Killer7* I feel that either term is applicable to the game as it engages with notions of self-identity, and simultaneously stays distant.

<sup>16</sup> Michel Foucault, *Discipline & Punish: The Birth of the Prison*. Translated from the French by Alan Sheridan, 1977. (New York: Vintage Books, 1995).

## Junction: Staging

Videogames are constructed; they don't magically appear. Code does not write itself, visuals do not leap from the ethereal plane, and logic does not just exist. There is a force behind everything and a context from which it originates.

Staging is the constructed context in which a gamer is directly addressed. Staging addresses the player, the gamer, not the character, nor the avatar. It may be something minuscule and simple, or it may be something grand and complex. The game may offer you –the gamer- a choice of names or statistics, or may stop and talk to you directly, even using your name or personal information.<sup>17</sup> It is not important in what fashion you are addressed, but that it is addressing you.

Staging within *Killer7* is a form of addressment, a form of speech. The game formally and repeatedly speaks, addressing the gamer and his notion of self-identity. It is always a disconcerting feeling when being addressed by an inanimate object; in such that you don't know if you should pay no attention, or special attention to what is being said. *Killer7* offers a multitude of Staging, but to best determine if we should be paying attention I will focus upon two examples.

A junction is a point where two or more things are joined; but more often than naught we view them as a place where one thing splits into two or more things.<sup>18</sup> When on the railway, trains and passengers often encounter such junctions. Within that context, the conductor must choose which route is the best, selecting one and forcing all within the train to follow. Within *Killer7* the gamer is frequented by junctions while on-rails, forcing a choice; demanding that the gamer determine which path he will take to best reach his goal, and taking with him the seven personalities within *the Killer7*.

Upon encountering a junction, (stairs, a door, a path, etc.) the gamer is no longer able to blindly progress forward upon the rails. He is instead seen as running in place, spinning his proverbial wheels upon the choice confronting him. When confronted with this choice the gamers' screen is visually overhauled changing dramatically on two fronts, directly addressing the gamer.

<sup>17</sup> Konami. *Metal Gear Solid 2: Sons of Liberty* (videogame). Tokyo: Konami, 2001.

<sup>18</sup> "Junction," *The New Oxford American Dictionary, Version 2.0*. 2005. Apple Inc.

First, the normal perspective that the gamer interacts with changes dramatically. The camera swings from its normal over-the-shoulder view to a new perspective, not conforming to any usual genre standards, and not to *Killer7*'s normal perspective. The viewpoint seems random upon encounter, and is not easily –nor ever- learned by the gamer. The change conveys an unease and disembodiment from the game, forcing the gamer to situate himself outside of the camera, and outside of the game itself.

Secondly, a large visual text-map overtakes the screen. The gamer, are forced to read and choose which path to take in order to progress. The text, much like the perspective, appears random and non-conducive to muscle-memory nor memorization, leaving the gamer to visually and textually read, acknowledge, and accept a path before entering. It is only when he makes the choice, this choice, that the game allows progression. Only from this progression is the gamer able to be.

Beyond the junction, the gamer encounters an oddity, an unknown. The gamer approaches a bloody paper sack in a strangely familiar area. Upon encounter the screen cuts out, filling the television with the snow of no signal, of no game. His viewpoint fills with the image of another's television. It appears blank, allowing him to see his own reflection inside of it, but then suddenly powers on. He see a past persona, a past life, from which only the bloody paper sack remains.

Staged at this instance, the game steps outside the conventional context, placing the gamer in a position to confront the fractured identity of *the Killer7*, and their own role within. The gamer is Staged, situated to engage with the seven personas through the in-game television, freely exploring the identities and personas through the physical lens of their own screen; forcing choices between life and death –not-life- through the material world atop the game's.

Forced to distinguish between personas, the gamer is poised to presuppose his self-identity atop the persona hierarchy within *Killer7*. The gamer is now aware of himself, and his Control. The television acts upon the gamer much like a mirror, forcing awareness of self-identity, and reflexivity, in a Lacanian sense. The gamer is left to choose his role within this new context, and more immediately, with the revival of the fallen personas of game and gamer alike.

The gamer is nothing more than a perpetual child, trapped within unknown environments, encountering new events; imposed upon to make important decisions. Games are the

mirrors, allowing gamers to see the *gamespace*, the world within they live, and their place within.<sup>19</sup> Unfortunately some mirrors are not as reflective as others, occluded by frivolities and trifles. But within *Killer7*, reflectivity manifests through Staging, imposing upon the gamer to choose; forcing him to realize that he is different and separate from the seven personas within. These choices, these Stagings give gamers Control.

#### Junction: Visuality

Videogames are visual; they are a faculty of insight. They are not a primary of a singular sense. Neither hearing, sight, smell, taste nor touch, may illustrate nor accompany an idea alone. Rather in sight, is the seeing, the divulging, the process of sense and of sense making.

*Killer7* employs a sense of Contemporary style, of graphic arts, of Anime. It transcends the two-dimensional formats to that of the third dimension, receding from gamespace; receding from the screen. *Killer7* encapsulates and encloses this dimensional hyperbole, calling upon the cells and shadings of the visual to create and enclose the world from which the game and gamer interact.

Just as *Pokemon* influences and sways millions of children daily beneath its visual style, so too does *Killer7* influence and sway the gamer. For both, the commonality of the child is immutable. Both mediums in their own rite are adult, yet child-like. They are both suspect to the child, irrefutably connected to the self-reflection of the gamer. Foreign ideologies and philosophies do lay within *Killer7*, expressing themselves through the sense, and sense making; through the Visuality.

*Killer7* methodically encapsulates this distinct dichotomy of child and adult, of gamer and game, for an expressive purpose. It adopts both the cell, and the shading, for more: objects, animations, and actions. *Killer7* adopts the cell and the shade, as cell-shading, conveying more through *procedural expression*; It empowers the hardware, forcing it to its maximum processing intensity [horsepower,] better facilitating more Control, and more Stagings.<sup>20 21</sup>

19 McKenzie Wark, 19.

20 Cel-shaded animation (also called cel-shading or toon shading) is a type of non-photorealistic rendering designed to make computer graphics appear to be hand-drawn. Cel-shading is often used to mimic the style of a comic book or cartoon." Also referred to as cell-shading.

21 Ian Bogost, "Procedural Rhetoric," *Persuasive Games*. (Cambridge, MA: MIT Press, 2007), 44.

Seemingly, no lawyers, senators, nor rating boards would ever sensibly approve of a commercial game containing schizophrenia, terrorism, murder, sex, child mutilation, organ harvesting, nor suicide. Kids surely have seen enough realism on television, and surely notions previously mentioned would be overly grotesque if seen as realistic. *Killer7* would be near unbearable if it lacked the visual style it so embraces; it would break cohesion with the game and gamer. Even as visually stylistic as it is, *Killer7* may already be "a criminal conspiracy to distribute sexual material harmful to minors in violation of criminal statutes."<sup>22</sup>

*Killer7* utilizes Visuality to occlude visceral ideologies of Control, passing them by the Entertainment Software Rating Board [ESRB] as an "M" [Mature] title. It allows the game's content to be palatable for the gamer, allowing him to experience disconcerting events beyond the visual.<sup>23</sup> For without the visual style, without the bounding box of the cell, monstrosities would be sure to follow, leaping from game to gamer, causing nausea and finally aversion.

Without *Killer7*'s visual style, Visuality only facilitates the gamespace, -the real. The game cannot access the gamer without a cell, nor the gamer access the game. Both must primarily posit the sight, the insight, to empower interaction. Both must see to interact, to Stage, and to Control.

#### Epilogue

Videogames are uniquely distinct from any other medium as they posit interactivity, reflexivity, & visuality above all else. *Killer7*'s use of Control, Staging, and Visuality pronounce the medium's distinctness, but in a uniquely authored manner. *Killer7* is a prime example of the authorial dialectic; the author investigating notions of truth, and opinion, inquiring into the dichotomy of the physical-meta-physical.<sup>24</sup>

22 Jack Thompson, "Killer 7" personal email to Patricia Vance, president of the ESRB, *JackThompson.org*, (August 5, 2005). [http://www.jackthompson.org/video\\_game\\_cases/killer7.htm](http://www.jackthompson.org/video_game_cases/killer7.htm). (March 13, 2008).

23 "Titles rated M (Mature) have content that may be suitable for persons ages 17 and older. Titles in this category may contain intense violence, blood and gore, sexual content and/or strong language." (ESRB, "Ratings Guide," in *Entertainment Software Rating Board* (November 11, 2007). [http://www.esrb.org/ratings/ratings\\_guide.jsp/](http://www.esrb.org/ratings/ratings_guide.jsp/). (November 11, 2007).

24 From this investigation, I wonder if distinctions between character and avatar are irrelevant in cases of strong authorial dialectic. Notions of identity/self-identity, embodiment/disembodiment, agency/target, real/unreal, and author/player become mute.

Goichi Suda [Suda51] is said author of *Killer7*.<sup>25</sup> He is the director. He is the writer. He is the *auteur*.<sup>26</sup> Control, Staging, and Visuality are Suda51's marks; they are his original concepts, his distinct ideas, his "punk spirit."<sup>27 28</sup> Without Suda51 there is no *Killer7*, there is no artifact.

*Killer7* is a commercial game. Goichi Suda was paired with renowned producers, Kobayashi Hiroyuki of the *Devil May Cry* series, and Shinji Mikami of the Resident Evil series, to ensure a commercial success, and to ensure that it was the rebuttal to the success of GTA and MGS. *Killer7*'s hype and media secrecy were not mere trifles, but planned marketing strategies. Much to the dismay of Capcom, *Killer7* sold abysmally in the United States, and while continuing to author new games, Suda51 now leads his company Grasshopper Manufacture [GHM] with new publishers willing to take risks.<sup>29</sup>

Self Reflection was simultaneously the beauty and bane of *Killer7*. It failed so horribly commercially for the same reasons it succeeded as an authored artifact. Goichi Suda's concept, his "punk spirit," and his dialectic were just too strong. The gamers are in fact players; they have no intention of critical thought. For players, Suda51's game while stylish was too obtuse. The players ended up not only seeing the game, but also themselves in relation to the game. Inevitably, like many children, they saw themselves and became scared.

"*Killer7* really is a piece of art as far as gaming goes."<sup>30</sup>

You just have to be gamer to be aware, and aware to be a gamer.

#### References

Barth, Roland. "The Death of an Author." In *Image, Music, Text*. Transcript, Stephen Heath, New York: Hill and Wang. 1977.

Big Gaz. "Metal Gear Solid 3 Exclusive for Sony." May 15, 2003. *Gameplanet*. (March 14, 2008) <http://old.gameplanet.co.nz/mag>.

25 Suda51 is a pseudonym for Goichi Suda; "Go" "ichi," equating to "51."

26 "Auteur." *The New Oxford American Dictionary, Version 2.0*. 2005. Apple Inc.

27 IGN Staff and Hiroyuki Kobayashi.

28 Chris Woodward, "Post-GDC: Suda says Punk's Not Dead," in *Gamasutra* (March 12, 2007). [http://www.gamasutra.com/php-bin/news\\_index.php?story=13098](http://www.gamasutra.com/php-bin/news_index.php?story=13098). (October 26, 2007).

29 VGChartz, "Killer 7 (PS2)," in *VGChartz* (October 23, 2007). <http://vgchartz.com/games/game.php?id=3586/>. (October 23, 2007).

30 Ivan Sulic, "Preview: Killer7. Mister personality disorder slaughters zombified time bombs," *IGN* (February 25, 2005). <http://cube.ign.com/objects/495/495539.html#previews/>. (October 26, 2007).

<http://cube.ign.com/objects/495/495539.html>.

Bogost, Ian. "Procedural Rhetoric." *Persuasive Games*. Cambridge, MA: MIT Press, 2007.

Ebert, Roger. "Games vs. Art: Ebert vs. Barker." *Chicago Sun-Times*, June 21, (November 6, 2007) <http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/20070721/COMMENTARY/70721001>. Foucault, Michel. *Discipline & Punish: The Birth of the Prison*. Translated from the French by Alan Sheridan, 1977. New York: Vintage Books, 1995.

IGN Staff. "Capcom's Fantastic Five." November 13, 2002. *IGN*. (October 27, 2007) <http://cube.ign.com/articles/377/377330p1.html>.

IGN Staff and Hiroyuki Kobayashi. "Interview: Killer7. How exactly do you play this game? Producer Hiroyuki Kobayashi explains... sort of." March, 7 2004. *IGN*. (October 23, 2007) <http://cube.ign.com/articles/499/499432p1.htm>.

Konami. *Metal Gear Solid 2: Sons of Liberty* (videogame). Tokyo: Konami. 2001.

Levine, Robert. "Reaching the Unreachables." October 1, 2005. *CNNMoney*. [http://money.cnn.com/magazines/business2/business2\\_archive/2005/10/01/8359280/index.htm](http://money.cnn.com/magazines/business2/business2_archive/2005/10/01/8359280/index.htm). (March 16, 2008)

Qualls, Eric. "Grand Theft Auto: San Andreas (Review)." 2004. *GamesFirst*. (March 14, 2008) <http://www.gamesfirst.com/index.php?id=188>.

"Second Annual London Consumer Conference." Take-Two Interactive Software. 26 Sept. 2007. Piper Jaffray.

Sulic, Ivan. "Preview: Killer7. Mister personality disorder slaughters zombified time bombs." February 25, 2005. *IGN*. (October 26, 2007) <http://cube.ign.com/objects/495/495539.html#previews/>.

Thompson, Jack. "Killer 7" personal email to Patricia Vance, president of the ESRB. August 5, 2005. *JackThompson.org*. (March 13, 2008) [http://www.jackthompson.org/video\\_game\\_cases/killer7.htm](http://www.jackthompson.org/video_game_cases/killer7.htm).

VGChartz. "Killer 7 (PS2)." *VGChartz*. <http://vgchartz.com/games/game.php?id=3586/>. (October 23, 2007)

Wark, McKenzie. "Agony." *Gamer Theory*. Cambridge, MA: Harvard University Press, 2007.

Woodward, Chris. "Post-GDC: Suda says Punk's Not Dead." 12 Mar. 2007. *Gamasutra* October 26, 2007. (October 26, 2007)

# Artistic Exploration in Game Development Education

Keywords:  
gaming, art in gaming,  
3D gaming in the  
classroom, teaching 3D  
gaming

Todd Emma  
East Tennessee State University

## Abstract

As digital media programs graduate students with gaming related degrees, one mission for educators is to instill the idea of artistic exploration. The classroom is ideal for this as it has the ability to control the size and scope of projects: instructors can emphasize quality and originality without the limitations of a production environment, freeing students to explore their artistic vision. This type of exploration can be seen when students implement a milestone-based approach to project development, while given freedom from real-world technical limitations.

Todd Emma received his M.F.A. from Memphis College of Art where he studied Interactive Digital Media, then spent several years in Fort Lauderdale, FL where he operated his design studio "Voodoo Designs" and taught at the Art Institute of Fort Lauderdale. He later became the Director of Marketing and Web Design at Steeda Auto-Sports while continuing to teach parttime. Missing the world of gaming and 3D, Todd went back to teaching fulltime at AIFL in the Game Design department as the Game Engine Technology Expert. He is now with the faculty at ETSU to develop a program in Game Design.

Are video games art? Art and artistic expression encompass many different ideas and areas. Tolstoy, in "What is Art?" states that:

It will likewise be art when a person who has experienced in actuality or in imagination the terror of suffering or the charm of gratification expresses these feelings on canvas or in marble in such a way that others are affected by them. <sup>1</sup>

He breaks art down further to say that art may be created using any method from ballet to baking.

Traditionally digital media arts, such as graphic design and 3D animation, are considered one type of art form and are opening the door for game design to also fall under the generalized heading of art. With the aid of artist friendly game design software, people producing game art are beginning to evolve from engineers and programmers into artists. It is essential that the teaching programs producing these designers are ensuring that the students are equipped with the necessary artistic fundamentals to meet the challenge. These developing game artists will need to be aware that they are capable of shaping society, or on a smaller scale, affecting individuals, and sharing ideas and emotions that require artistic exploration.

Artistic expression has traditionally been taught throughout an art students' entire academic career. Painting, sculpture and most of the other traditional arts have not changed drastically over the last hundred years and are not likely to change dramatically over the next few months or years. Game design and digital media development tools can change as often as every three months. This is one important difference between traditional art and game design art that creates very different learning environments for the two genres. Game design art relies on highly technical ever evolving software, requiring game design programs to have a heavy emphasis on the technical aspects of game design, coding, modeling and animating. This creates a "learn the tool mentality" environment with minimal attention being applied to the actual ideas or artistic expression of the learner. Attempting to teach both design and digital tools at the same time can be overwhelming to students. How can the basics of artistic expression be instilled in this new generation of digital game artists if we are constantly looking for technical expertise in an ever changing field?

<sup>1</sup> Leo Tolstoy, *What is Art?* (Toronto George N. Morang, 1899), 73.

Dena Elisabeth Eber, a well published author and professor of digital media makes the argument in her paper on computer graphics curricula that:

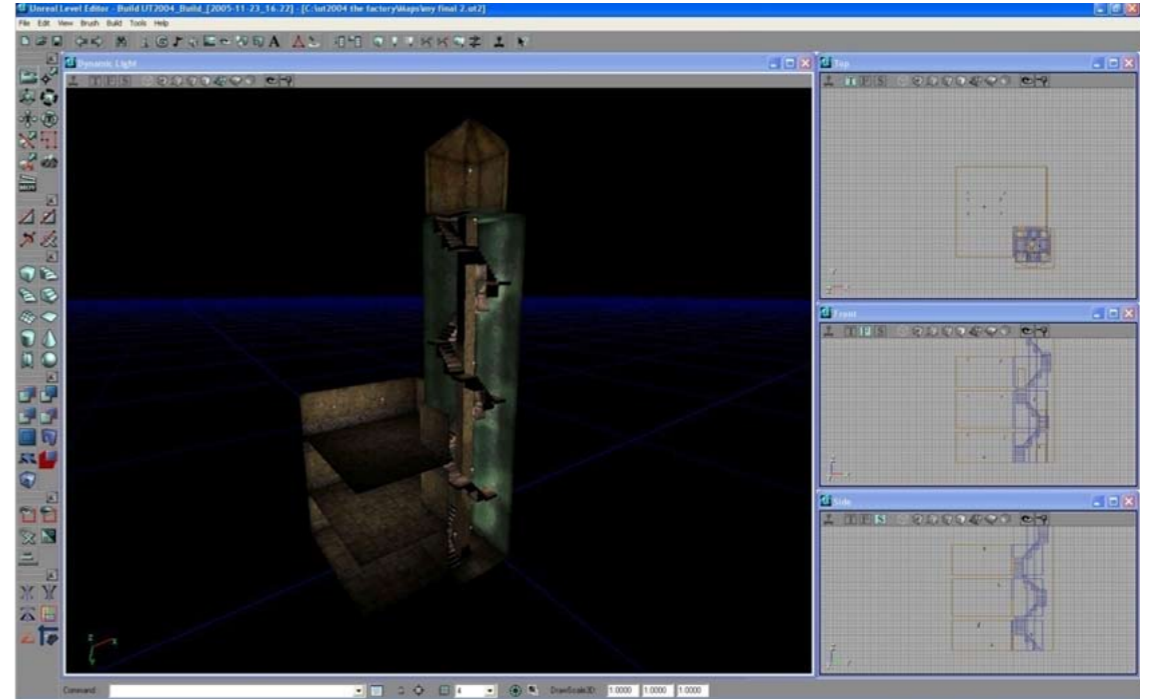
The tool set should be expanded only after students address content and show a level of comfort with the medium. In this way the digital techniques will be one important concern, among others. Further, the students then have time to figure out what they want to express, thus shaping the medium rather than the medium shaping them. <sup>2</sup>

In early sculpture classes, students are given a problem to solve using a limited number of tools and materials. By limiting the tools the instructor can separate the student's level of ability with the individual tools from the student's ability to convey his/her artistic expression. An example of this project is to use flat plywood and paint to create a 3D volumetric piece expressing an emotion:

- > **Problem:** Using planes to create volume
- > **Objective:** Create an object using plywood that has volume and expresses an emotion
- > **Materials:** Plywood, glue, paint (for color only)
- > **Tools:** band saw, sander, paint brush
- > **Dimensions:** Minimum size 4'x4'

In digital media or game design curricula, one of the first computer applications that students use is Photoshop. Photoshop, a program that is used to create 2D texture work, is an extremely open ended software package that has a great variety of tools to choose from. Many of these tools can do similar things. The available tool choices in the software can overwhelm students just entering into this field. One guiding technique for this is limiting the available tools that the student can use for a project. Using the ideas from the earlier mentioned sculpture project, students can be guided to artistic expression by using a limited selection of tools, because they have fewer tool choices to choose from they can use more time and energy for creativity. An example of this could be:

<sup>2</sup> Dena Elisabeth Eber, "Computer Graphics Curricula in the Visual Arts," *Computers and Graphics*, vol. 24, no. 6 (December 2000), 919-23. 5



Project A, Fitted Stairs

- > **Problem:** Creating vector objects for use with raster images
- > **Objective:** Use a self portrait and add a tattoo onto yourself that looks believable.
- > **Program:** Photoshop
- > **Tools:** The pen tool, a self portrait, layers and adjustment layers

Another example of an early project for a game design course that is using a game engine, such as the Unreal game engine is:

- > **Project Name:** Project A, Fitted Stairs
- > **Problem:** Mastering Stairways, using the stair brush tool in Unreal to create a working stair way.
- > **Objective:** Based on provided blue prints of a lighthouse, measure the area and height of the lighthouse tower, then mathematically create a stairway that fits exactly and snaps to the borders
- > **Program:** Unreal
- > **Tools:** Addition stairway brush

These types of limited projects allow the student to focus on the core skill set without being overwhelmed by design issues. It also allows the instructor to look at one or two aspects of a tool set creating the opportunity to see if the learner truly understands the tool and masters the tech-

nique before adding the next level of aesthetics onto the project. This is helpful for the instructor, the learner, and follows Dena Elisabeth Eber idea of only expanding the students' tool set after showing proficiency with an existing set of tools.

Is the class room conducive to creative thought and artistic exploration?

Good lessons provide some specific learning goals, practice objectives, and so on. If I ask students to do whatever they want to do, they often avoid risk by doing something they already have learned in the past. The amount of creative thinking may be zero. When there are limits, there is a better chance of having a challenging task. The teacher's challenge is to make the limits seem compelling and interesting to the student. <sup>3</sup>

In the class room an instructor can help to ensure achievement of specific learning goals by limiting a project's scope, tools, and/or functionality while creating a strong environment for creativity. This type of work can be built into projects encouraging students to push into areas where they may or may not be comfortable. If the instruc-

<sup>3</sup> Marvin Bartel, "Ten Class Room Creativity Killers," (October, 2008). <http://www.goshen.edu/art/ed/creativitykillers.html> (February 4, 2008).

tor approaches the problem in a manner that is simple to understand but challenging to complete, an assignment can make for an ideal setting for the exploration of artistic expression. Even if a work fails on one level, it may achieve success on another. In a learning environment, we can build from the success and learn from the failure through critique.

What are some steps that can create an environment that fosters artistic expression when designing a lecture or project? Here is a simple list of ideas to keep in mind when setting up a project:

- > Define all materials and tools that can be used. In digital media and gaming we can have size restrictions in kilobytes and polygons, make sure to roll these ideas into the project when appropriate. Define the software that can or should be used. Show why that software was chosen.
- > Keep the projects small. If there is a need for a large project, break it down into smaller projects then use a milestone system to allow the student to achieve small goals along the way.
- > Encourage creativity, "In any list of grading criteria, originality must have more importance than neatness. Neatness is style - not substance. As a style, it can get some credit, but other styles need to get just as much credit." <sup>4</sup>
- > Start with interesting ideas; if the student wouldn't naturally go to it, see it, or play within it, then why is the student making it? An example of this in level design is the student that wants to create a mod from his or her dorm room or classroom. Ask the student if they would go to either of those places given a chance to choose other locations. The answer is usually no, than ask them why anyone else would want to go there?
- > Try to keep the project limited but not sterile; clearly define specific problem that need to be solved. Create a well defined question for the students to answer.

Students do not always see the outcomes of a particular project; this impedes creativity and learning in the class room. By setting up some basic lines of communication between you and the student this can be overcome and may help to create a successful project:

- > Determine whether the project is intended to be based on form or function. This idea may seem obvious but to students just entering into a new software program, it can be difficult to see.
- > Discuss the difference between form and function for each project. When something is functional, above all it needs to be able to do whatever the thing's function is. When something is designed for form, above all it must be appealing to the viewer's eye. Projects that try to encompass both of these concepts early in a student's learning process often overwhelm the student.
- > Promote ownership of projects. Do not give students confining projects; instead present them with challenges. Give simple guidelines, present problems and then allow students to solve them. This will give the student a feeling of ownership over his or her own ideas and in the process will push them to be more creative in the project.
- > Documentation is essential; have the students draw up an idea before starting even the smallest of projects. From the beginning, make sure that the student has a clear idea of what he or she will be creating. Even just writing a quick paragraph that describes the base idea will work. This helps the student to articulate an idea and use it as a reference to set the scope of a project and prevent "feature creep".
- > Document all the technical aspects of a project before they begin production. For example when you build a house you identify needs, get a budget, decide on materials, and gather a team together then start production. This preplanning saves mistakes and time. When designing a project, students need to approach it with the same idea of process. What will it look like? What assets will be used? Who will do what? What are any other essential problems that need to be addressed? Asking and answering questions such as these is an essential phase of the artistic design process.
- > Have the students create a time-line with project milestones for larger projects; on most projects there are deadlines and goals that need to be achieved by key points. It is important that these goals are agreed upon early in the project. Often a student will only be given a project and a due date. This is counterproductive, by establishing many small dates that specify what should be finished by these milestones the instructor and the student work closer on a project. The instructor should not



Project B Designing a Single Space

see a project for the first time when it's due. Often in a production environment there are alpha, beta, and release.

By incorporating these small incremental steps, documentation, and ownership concepts into a class, students can successfully complete large, complex project assignments while incorporating a creative approach.

An example of this type of project is Project B Designing a Single Space it incorporates these ideas.

#### Project B: Designing a Single Space

**Project B** Designing a Single Space is a project from the second class in a level design sequence. This class requires that the student has taken a modeling class, a level design class, and a scripting class. The project takes roughly ten weeks and should achieve a deliverable in game cinematic that can be captured as a digital movie clip.

**Project Name:** Designing a Single Space

**Problem:** Design a creative and interesting single space environment that will use the matinee tool set in a game

engine to create a short cinematic for in game use.

**Objective:** This project does not create a playable level it only creates an environment for a cinematic to take place. Create a portfolio quality animation sequence using the game engines built in animation tools, implementing high resolution textures, low polygon models, lighting, shadows, emitters, triggers, projections maps and other visual elements that demonstrate your best ability to create a visually appealing room.

**Tools:** Unreal, Photoshop, and 3DS Max or Maya.

**Constraints:** Not more than one room or space, all polygon models must be optimized, the base of the room must be a subtraction brush from Unreal, this is a single person project, it must be completed in ten weeks.

**Milestones:**

- > The first milestone will be the initial paper work.
- > A one page description of what you will be doing and timeline.
- > A list of all models and textures to be in the scene.
- > The second milestone will be the initial geometry in the Unreal engine that you are planning on using as your space.
- > The third milestone will be that you have started

your modeling.

- > The fourth fifth and sixth milestones will be a percentage of the models done, the percentages will be determined by you in your timeline.
- > Milestone six one hundred percent completed models and textures.
- > Milestone seven, creating lighting and special effects for your scene.
- > Milestone eight, have completed your interaction and begun play testing (in this case showing the work to your peers for critique).
- > The Final milestone on the tenth week of the project will be your presentation to the class.

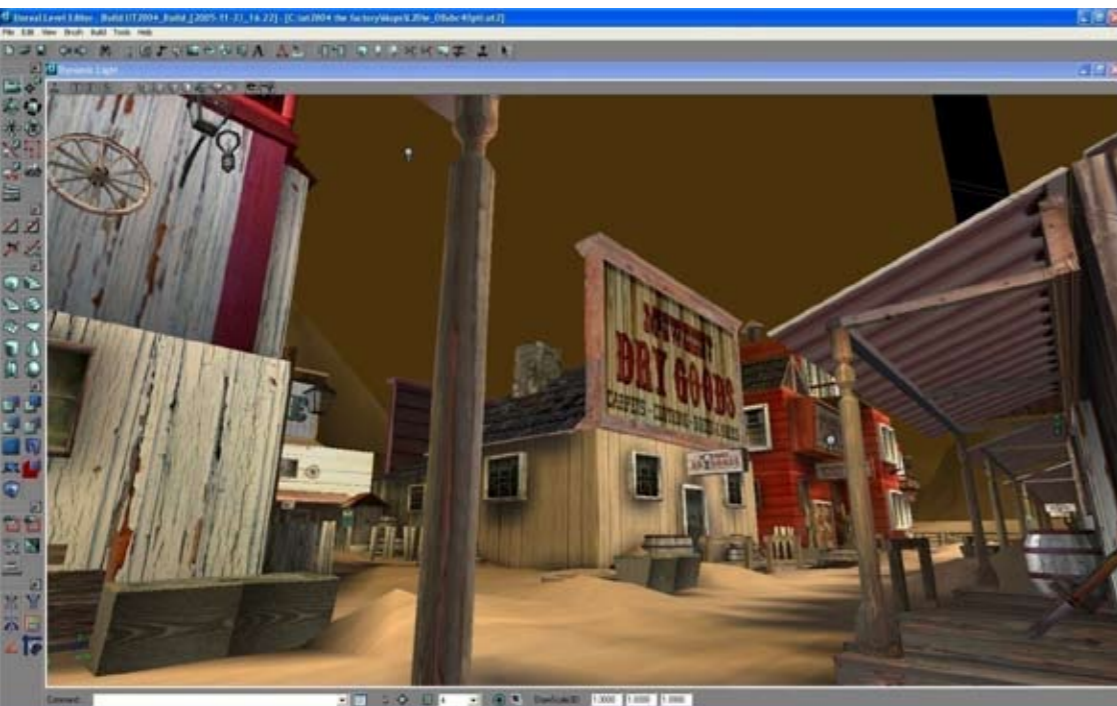
A successful idea to keep students creative is using themed projects from the earliest classes. This helps to get students entering into a program excited about the program. An example of this, in an intro to Photoshop class, is to ask what the level or mod is that they plan on creating later. Share with them some of the upcoming projects in other classes. Then ask them to design textures that will be used in later projects. Help them to see that they are creating a library for future use; not just a project for intro to Photoshop. When it comes time to assign a project to students in their first few classes, it is important that you do not overwhelm them. Keep the projects simple, and have

clear outcomes. This does not mean make the projects easy, make them either about function or form but steer away from projects where the student will need to learn new software and new artistic ideas at the same time.

Also tying two or three small projects together or including graded milestones can have great success. For example if in the first project the student creates a model and in the second project he/she creates a lit scene, then in the third project he combines the two things the milestone are clear, and attainable. This way you and the student are able to gauge the student's ability to do each part of the project. You will improve the chances of not overwhelming the student, and can achieve a large advanced project.

#### Project C Outdoor environment

In Project C, students can see examples of different elements at work and not know where to start. This project is broken down into several small steps for the students, textures, models, environment, lights, animation and interaction. By working on each small milestone, the student isn't able to create weak work in any one area unnoticed. Each step needs to be treated as an important part of the project; paper work is of equal importance to modeling.



Project Name: An outdoor environment

An example of a complex project that can be broken into several smaller assignments is Project C Outdoor environment this project is from the third class in a game design sequence. This project is extremely large at the end; to keep it manageable for students it is broken down into multiple smaller milestones. This class requires that the student has taken a modeling class, a level design class, and a scripting class. The project takes roughly 12 weeks and should achieve a portfolio quality mod.

**Problem:** Design a creative and interesting outdoor environment that will use a figure eight style arena.

**Objective:** To create a portfolio quality piece that is functional as a playable level, using high resolution textures, low polygon models, lighting, shadows, emitters, triggers, projections maps and other visual elements that demonstrate your best ability to create a visually appealing area.

**Tools:** Unreal, Photoshop, and 3DS Max or Maya

**Constraints:** All polygon models must be optimized, the base of the arena must be a subtraction brush from Unreal, this is a team based project, it must be completed in 12 weeks.

**Milestones:**

- > The first milestone will be the initial paper work.
- > A one page description of what you will be doing and timeline.
- > A list of all models and textures to be in scene.
- > The second milestone will be the initial geometry in the Unreal Engine that you are planning on using for your arena.
- > The third milestone will be that you have started your modeling.
- > The fourth fifth and sixth milestones will be a percentage of the models done as laid out by you in your timeline.
- > Milestone six being one hundred percent completed models and textures.
- > Milestone seven will be to create lighting and special effects for the scene.
- > Milestone eight, have the interaction completed and begun play testing.
- > The final milestone on the 12th week of the project will be the presentation to the class.

The teaching method discussed in this paper lays out projects with complex ideas while maintaining simple constraints and objectives. This idea of simple steps helps students to achieve a more artistic approach to game design projects. By breaking down each piece of a project for the student, into small concise steps, a project with more artistic expression is achievable by allowing the student to focus on the design instead of the tools. By presenting students with problems that need to be solved instead of minimum requirements, we start to create an environment that explores creatively from the beginning of the project. Combining these ideas with verbiage like “create an interesting space” and “create work that is portfolio quality”, students explore their own artistic expression and feel ownership of the project, rather than just doing assignments. By instilling this ownership in game design programs we can create a space where artistic expression is explored and new creative processes can be learned simultaneously without sacrificing either.

#### References

- Busby, J. & Parrish Z. & Eenwyk, J.V. *Mastering Unreal Technology: The Art of Level Design*. Indianapolis: Sams Publishing, 2005.
- Bartel, Marvin. “Ten Class Room Creativity Killers.” <http://www.goshen.edu/art/ed/creativitykillers.html>. (accessed February 4, 2008).
- Eber, Dena Elisabeth. “Computer Graphics Curricula in the Visual Arts,” *Computers and Graphics*, vol. 24, no. 6 (December 2000), 919-23.
- Thompson, J. and Barnaby B.G. and Cusworth N.. *Game Design*. Hoboken, NJ: John Wiley & Sons Inc, 2007.
- Tolstoi, Leo. *What is Art?* Toronto: George N. Morang, 1899.

# Key Words

narrative, spatial narrative, video games, interactivity, rhetoric, digital space

# Navigating the Gap: The Rhetoric of Digital Space and Interactive Narratives

Jeff Ritchie  
Lebanon Valley College

**Abstract**  
In hypertextual and digital, interactive narratives, space creates meaning. Whether it's the gap created by a hypertextual link or the metaphoric "architectural" space in a first person shooter game/narrative, audiences of digital narratives create meaning where they

Jeff Ritchie  
Jeff Ritchie is an assistant professor of English and Digital Communications at Lebanon Valley College, where he teaches courses in writing, literature, digital media and communications. He received a B.A. in English and a B.S. in Marketing from Indiana University, an M.A. in English from the University of South Carolina, and an M.Ed. in Educational Media and Computers and a Ph.D. in English literature from Arizona State University. His research focus is narrative in digital media and the rhetoric of interactivity. He currently serves as an Assistant Editor for The iDMA Journal.



A desktop environment with a yellow background. The desktop is cluttered with numerous icons, including PDF files, folders, and application shortcuts. A taskbar at the bottom shows the Start button, several open applications, and system tray icons. The overall aesthetic is that of an early 2000s Windows operating system.

encounter gaps. In digitally mediated interactive narratives, most of the negotiations and narrative elements (but not all) come together in the storyspace of the narrative, which operates as both the representation or writing space through which the story is mediated and the audience's mental map of this space—their understanding of the storyspace in which a story takes place. In order to understand how digital spaces allow for and influence audience interactivity to further narratives, we must understand the many different spaces “the loci” in which digital narratives attempt to afford or constrain interaction. This paper proposes to explore how the idea of the gap and space inform our understanding of how narrative works in digital interactive texts (through analyzing the digital space within which readers interact and create meaning) and categorize those loci that hold those digital rhetorical forms that prompt and constrain user interactivity in the expanded “gaps” and spaces afforded by interactive, digital narratives.

Let me begin with my conclusion. In hypertextual and some digital media narratives, the ending is postponed. It is a literature of exhaustion.<sup>1</sup> This wonderful sound-byte has at least two possible meanings. First, as my students would often claim, hypertext ends through physical (or emotional) exhaustion. The audience stops when they've had enough. But the second interpretation is actually more appropriate. Closure is reached in hypertext not through the physical exhaustion of the audience, but through the audience exhausting the possibilities of what, for the purposes of this paper, I will call the storyspace of the narrative. The storyspace is the represented space in which a story is mediated and the visualized sense of space created by the storyworld, which is the world in which the narrative is set and in which readers attempt to immerse themselves. Narratologists term this act of representation mimesis, which differs from diegesis, meaning both to tell or to narrate a story and the fictive world in which a story takes place. So that I might distinguish between the two meanings of diegesis in this paper, when referring to the fictitious world of the story I will use the term storyworld.

Explanations and categorizations of storyspaces in digital and interactive narratives abound. Michael Joyce distinguishes between two types based on the range of interactivity they allow. Exploratory space occurs in those works that only allow the audience to choose paths, links or lexia. Some hypertexts and video games fall in this category. Constructive space empowers the audience to create content as well as navigate the object. Examples of this type of space include the game *Second Life* and hypertext that allow the creation of content, links, and lexia.<sup>2</sup> The storyspaces represented by games are divided into eleven categories in Mark J. Wolf's *The Medium of the Video Game*. Of these types, I'm primarily interested in his tenth category, interactive three dimensional environments,<sup>3</sup> although this rhetoric can apply to other video game spatial categories and hypertextual forms.

1 Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (Cambridge MA.: MIT Press, 1997), 174.

2 Michael Joyce, “Siren Shapes: Exploratory and Constructive Hypertexts,” in *Academic Computing 3.4* (1988): 10-14, 37-42.

3 Mark J. Wolf, “Space in the Video Game,” in *The Medium of the Video Game*, edited by Mark J. Wolf, (Austin: University of Texas Press, 2001), 67.

In digitally mediated interactive narratives, most of the negotiations and narrative elements (but not all) come together in the storyspace of the narrative.<sup>4</sup> Storyspace is similar to what Janet Murray calls the “navigable space” represented in a digital environment.<sup>5</sup> As noted earlier, the storyspace operates on two levels: as both the representation or writing space through which the storyworld is mediated and the audience's mental map of this space—their understanding of the storyspace in which a story takes place. The audience attempts to understand a storyworld through exhausting the possibilities of its storyspace. To do so requires that the audience understand the storyspace in their explorations and mental mapping of many, most or all of the conceptual blank spaces in the work. This interpretation's distinguishing between the spatial representation of a story, the audience's mapping and understanding of the space in which a story takes place and the audience's achieving narrative closure underscores the narrative possibilities of digital, interactive forms and poses several problems for designers and audiences. In order to understand how digital spaces allow for and influence audience interactivity to further narratives, we must understand the many different spaces—the loci<sup>6</sup>—in which digital narratives attempt to afford or constrain interaction.

In hypertextual and digital, interactive narratives, space and gaps create meaning.<sup>7</sup> Whether it's the gap created by a hypertextual link or the metaphoric “architectural” space in a first person shooter game/narrative, audiences of digital narratives create meaning where they encounter gaps. Architectural space is not about walls, but about the space the walls create. Our experience of architectural space requires placing ourselves in that space and moving through it. Design is (partly) about the space between visual elements. In film, the gaps between frames lend the images motion.<sup>8</sup> The meanings of objects on the page—in the text or in the measure—are important, but their

4 While Eastgate named their proprietary hypertext writing software Storyspace, I chose the term because it best evokes the notion of spatial storytelling. “Storyspace,” Eastgate publishing. <http://www.eastgate.com/storyspace/index.html> (accessed July 23, 2008).

5 Janet H. Murray, 79.

6 For the purposes of this article, I use the term loci not in the sense of “commonplaces” as it is used in rhetoric, but in the sense of spaces in which events or actions take place.

7 I first encountered the idea of the gap in Gregory Ulmer, “The Miranda Warnings: An Experiment in Hyperhretoric” in *Hyper-text 2.0*, edited by George Landow (Baltimore: Johns Hopkins University Press, 1997), 344-77.

8 It is only through the continuity of vision that we lend motion to the series of images in film.

order, the syntax of the elements, also creates meaning in that the author leaves the audience to fill in this gap. And this spatial void has its counterpart in time; it's something that playwrights, musicians, and filmmakers have known and adapted to their ends. Think of the “Pinter pause”; the pause used by the playwright Harold Pinter to convey emotion and to allow the unease of the play to soak into the audience. Think of the pause of the comedian waiting for an effect or the rest between notes in music. We fill in the gap. This paper proposes to explore how the idea of the gap and space inform our understanding of how narrative works in digital interactive texts (through analyzing the digital space within which readers interact and create meaning) and categorize those loci that hold those digital rhetorical forms that prompt and constrain user interactivity in the expanded “gaps” and spaces afforded by interactive, digital narratives.

It's important to note that this essay is not a poetics of interactivity or digital space. I'm concerned primarily with categorizing the loci in which digital storyspaces create satisfying, dramatic narratives through the molding of audience behaviors, rather than setting down the aesthetics of digital narratives. While much has been written on the rhetoric of hypertext fiction and links,<sup>9</sup> little has been written on the rhetoric of digital space. If rhetoric is doing things to people with words, what is a rhetoric of interactivity in digital narratives? I'd define it as prompting and constraining audience interactivity in a variety of loci in the work. Interactive narratives require constraining and prompting the audience. The design of the interface, setting, the characters, interactions, events and rules along with the story (both mimetically and diegetically mediated) must operate in a number of loci towards the goal of facilitating the audiences' interactions with the digital narrative. As Jenkins states, “The organiza-

9 Jay David Bolter, “The Rhetoric of Interactive Fiction,” in *Texts and Textuality: Textual Instability, Theory, and Interpretation*, edited by Philip Cohen (New York, NY: Garland, 1997), 269-90; Mark Bernstein, “Patterns of Hypertext,” (Eastgate Systems Inc., 1998) <http://www.eastgate.com/patterns/Print.html> (accessed July 23, 2008); John M. Slatin, “Reading Hypertext: Order and Coherence in a New Medium,” in *Hypermedia and Literary Studies*, edited by G. P. Landow and P. Delany (Cambridge: MIT Press, 1995), 153-169; George P. Landow, “The Rhetoric of Hypermedia: Some Rules for Authors,” in *Hypermedia and Literary Studies*, edited by G. P. Landow and P. Delany (Cambridge: MIT Press, 1990); George P. Landow, “Relationally Encoded Links and the Rhetoric of Hypertext,” in *Hypertext '87 Proceedings*, (Baltimore: Association for Computing Machinery, 1987), 331-344; Terry Harpold, *Links and Their Vicissitudes: Essays on Hypertext*. Dissertation Abstracts International 56, no. 3 (1995 Sept): p. 916A. Dissertation: U of Pennsylvania; 1994.

tion of the plot becomes a matter of designing the geography of imaginary worlds, so that obstacles thwart and affordances facilitate the protagonist's forward movement towards resolution."<sup>10</sup>

The idea of a narrative, as it is mediated through traditional means such as the codex, has a long history. Narratives in this instance have usually involved characters/agents who experience a conflict—an agon—through a series of events. These events, causally related and chronologically oriented, are organized to reveal to the audience the perspective of the author, and take its form as a unified text with a coherent organization.<sup>11</sup> Traditionally, narrative “is a fundamentally temporal and consequently linear form of meaning.”<sup>12</sup> The words follow one after the other. Order, causality, and complex relationships become possible, but these ideas are expressed linearly, like a ray in geometry. Any events that take place outside of the linearity of the plot-line, or narrative arc that exist within the storyworld but are not experienced by the audience, form the extradiegetic space of the storyworld. Those elements of the narrative arc that seem incongruous or don't contribute to the unity of the work are purposeful digressions or discordance—noise.

Marie-Laure Ryan chooses to define narrative as medium-free and taking place in the mind's of the audience.<sup>13</sup> My paper's understanding of narrative stems from hers and rests on four key assumptions: 1) narratives require mediation, 2) narratives are unified, 3) narratives require an implied author, and 4) narrative ultimately takes place in the mind of the audience.

### 1. Narratives Require Mediation

Now, for a person interested in artistic expression—the “how” rather than the “what” of a story—the really interesting point is how the narrative is conveyed or mediated. Also known as the *sjuzet*, this act of mediation is where the magic takes place, for it's in how the author mediates

this text that we find the richness of detail, the compelling lines, images or sounds that convey the force and grandeur of the stories we tell. Narratives are mediated through symbolic forms of one shape, type, or another and this mediation has an effect on the narrative, yet narrative is not solely depending on one form of media. The storyspace is the expression of this mediation.

This definition of narrative that allows for the effects of mediation differs from theories of narratives such as Gerald Prince's that uses media to separate narrative from performative or dramatic situations.<sup>14</sup> The importance of this distinction is seen in Markku Eskelinen's article, “The Gaming Situation,” which uses the media litmus test to effectively sever narrative from video games through the article's emphasis on “recounting” as a primary indicator of narrative, claiming that:

“a dramatic performance representing (many fascinating) events does not constitute a narrative either, since these events, rather than being recounted, occur directly on stage.”... So a mere story is not sufficient to make something a narrative, as there must also be a narrative situation implying the presence of narrators and narrates.<sup>15</sup>

This emphasis on recounting as a form of mediation and the requirement of the presence of a narrator and narratee would then seem to ignore emergent narratives, or those narratives that take place spontaneously, and to overlook the role of multiple author/participants creating a narrative. Recounting seems to rely on a limited view of “acceptable” forms of mediation and focuses solely on diegetic forms of narratives, which is somewhat problematic and limiting. What differentiates a story told to an audience and a story acted out for an audience, other than the degree to which the “author” uses mimetic and diegetic elements in the mediation of the narrative? Such a narrow definition of “recounting” limits needlessly the medium through which stories take place, effectively eliminates some forms of mediation as narrative, and denies the existence of some forms of narrative, such as drama or computer games, that rely more on mimesis than on diegesis. For the purposes of this paper, my argument allows that narratives can take place both mimetically and diegetically regardless of medium in which it is delivered.

<sup>10</sup> Henry Jenkins, “Game Design as Narrative Architecture,” in *First Person: New Media as Story, Performance, and Game*, edited by Noah Wardrip-Fruin and Pat Harrigan (Cambridge, Mass.: MIT Press, 2004), 126.

<sup>11</sup> H. Porter Abbott, *The Cambridge Introduction to Narrative*, (Cambridge: Cambridge University Press, 2002), 12-24.

<sup>12</sup> Marie-Laure Ryan, “Multivariant Narratives” in *A Companion to Digital Humanities*, edited by Susan Schreibman, Ray Siemens, and John Unsworth (Malden, MA: Blackwell, 2004), 428.

<sup>13</sup> Ryan, “Multivariant,” 417-19.

<sup>14</sup> Gerald Prince, *Dictionary of Narratology*. (Lincoln: Univ of Nebraska Press, 2003) 58.

<sup>15</sup> Markku Eskelinen, “The Gaming Situation,” in *Game Studies*, 1 (1) <http://www.gamestudies.org/0101/eskelinen/>. (accessed July 23, 2008).

While historically or culturally rooted expectations of narrative unity can change (and have), narrative today still seems to rest on the expectation that the audience will fill in this gap, thereby providing closure.

## 2. Unified/Closure

Narratives are unified—to a degree. Consider Chekhov's advice, "If in the first chapter you say that a gun hung on the wall, in the second, or third chapter it must without fail be discharged."<sup>16</sup> If Chekhov's view of narrative holds true regardless of the medium used to tell the story, what does this quote mean to our understanding of narrative? First, it implies a certain level of cohesion within the text (no extraneous materials). Second, it establishes an understanding of audience expectations. As Frank Kermode queries, "Why... does it require a more strenuous effort to believe that a narrative lacks coherence than to believe that somehow, if we could only find out, it doesn't?"<sup>17</sup> Third, it maintains that the work should honor/fulfill these audience expectations.<sup>18</sup>

In a narrative, the audience strives to associate those mediated events into some narrative form or order, stemming from the deep-seated belief that narrative represents a whole and that there is a point to the text. Take for instance the oft cited E.M. Forster statement, "'the king died and then the queen died' is just a series of unfortunate events where as 'the king died and then the queen died of grief' is a plot."<sup>19</sup> The first statement already links the two statements chronologically through the word "then." However, the series of unfortunate events is taken out of context. What transpired before these two events in the first sentence? Exploring the storyspace more might provide the audience with clues to fill in the gap by attributing causality to the second sentence, which illustrates both chronology (then) and causality (of grief at the death of the king).

Granted, this expectation of unity is an artifice of literary traditions and historical conventions. Also, the degree of unity attributed to a narrative is measured along a continuum. While historically or culturally rooted expectations of narrative unity can change (and have), narrative today still seems to rest on the expectation that the audience will fill in this gap, thereby providing closure. That being said, audiences weaned on traditional, successive narratives expect unity, disregard digression, and have within them a strong associative urge. J. Yellowlees Douglas claims that our reading—and this associative urge—takes the form of audience based prediction, in which audience members

16 Chekhov 23, as qtd in Abbott 56.

17 Abbott 93.

18 Abbott 93.

19 E. M. Forster, "Aspects of the Novel," (as quoted in Janet Murray *Hamlet on the Holodeck*, 185).

read and attempt to predict how the parts fit together to bring about a sense of closure.<sup>20</sup> We tend to expect unity in our narratives and attempt to associate a chronological order or causal relationship between those parts of a narrative that don't seem to fit as somehow contributing to a unified whole. This associative manner of thinking forms one instance of how the human mind works in general, described in Vannevar Bush's Atlantic article, "As We May Think."<sup>21</sup> Where hypertext and poststructuralist narratives often purposefully disrupt this narrative unity and hypermediation seems to call unity and immersion into question,<sup>22</sup> all rely on the audience's expectation of unity and closure in narrative.

In interactive texts, Lev Manovich touches on this notion when he discusses digital media. "[I]f a complete work is the sum of all possible paths through its elements, then the user following a particular path accesses only a part of this whole. In other words, the user is activating only a part of the total works that already exists."<sup>23</sup> Manovich attributes to the author of the text the power in creating the narrative as a whole, an object in its entirety created by the author to be discovered by the audience in their explorations. This particular description is limited in that it ascribes to the audience solely the ability to explore, not create, but the work exists as a whole.

## 3. Implied Author

This idea of unity and closure stems in part from what narratologists call the implied author. The implied author gives the work coherence and form and is the central controlling "fictive" force behind the narrative—"a sensibility behind the narrative that accounts for how it is constructed" and that "'accounts for' the narrative."<sup>24</sup> Is there in fact an implied author? Does this fundamental message exist in a single, unified state? Without an implied author—singular or plural—a narrative would in fact be a trick of chance. In it would be no order and no point. For narratives to work,

20 Douglas, J. Yellowlees, "'How Do I Stop This Thing?': Closure and Indeterminacy in Interactive Narratives," in *HyperText Theory*, edited by George P. Landow. (Baltimore: Johns Hopkins UP, 1994), 161-164.

21 Vannevar Bush, "As We May Think," in *The Atlantic Monthly* 176 (1) 1945, 101-108.

22 Jay David Bolter, and Richard Grusin, *Remediation: Understanding New Media*. (Cambridge: MIT Press, 2000), 31.

23 Manovich, Lev. *The Language of New Media*, (Cambridge, MIT press, 2001), 128.

24 Abbott 77.

the audience must believe that hidden in the work, in its entirety, is a whole.

## 4. Narrative takes place in the mind of the audience

The nature of narrative requires an audience, for narrative ultimately takes place in the audience's mind. If a narrative was in a forest, would it be a story? Note the problem with that statement. Narratives aren't in forests. They're told or read or seen. They're mediated in forests. Mediation requires an author, a medium, and an audience. The author authors, the audience audiences, and the medium connects the two. The author facilitates the interaction, however it is the user who creates meaning. While the definition of the role of the reader had traditionally been seen as somewhat "passive,"<sup>25</sup> audiences of interactive narratives require "more active participation," resulting in narratives depending on the audience in at least two ways. First, the audience must fill in the gap in order to create the series of causal and chronological connections required for all narratives to take place. Second, the audience in interactive texts must actually do some of the heavy lifting in order to bring the narrative into being.

What does "more active participation" mean? As an audience, we're given the opportunity to make decisions that alter the narrative on a local and global scale through the nontrivial efforts that Aarseth described in *Cybertext*.<sup>26</sup> In interactive drama, for instance, the audience is often offered a first person role as a character in the story. The narrative immerses the audience in the setting and events of the storyworld. In a first person game or interactive fiction, a "reader" operates as a character within the storyspace of the narrative—as the audience; "readers" play a part in the story and for their efforts are offered a first person perspective of the emerging narrative. In interactive narratives, the role of the audience and their participation in the shared authorship of the text brings the text into existence, resulting in an "interactive media work [that] is not only potentially open-ended, it does not exist unless there

25 I add scare quotes purposefully, for the critical trend in literary theory of the last thirty to forty years has been to invest a great deal of power in the audience. See, for instance, reader-response and postmodern theory.

26 Espen Aarseth, *Cybertext. Perspectives on Ergodic Literature*, (Baltimore: The Johns Hopkins University Press, 1997), 1.

is interaction."<sup>27</sup>

On a fundamental level, all acts of reading/interpretation are an act of authorship. The audience creates their own narrative based on the mediated narrative of the author (or on the degree of narrativity in a work). When we read a text, we can never really get at the message of the implied author without filtering it through our own subjectivities. Barthes makes this point:

We know now that a text is not a line of words releasing a single 'theological' meaning (the message of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash. The text is a tissue of quotations drawn from the innumerable centres of culture (...) but there is one place where this multiplicity is focused and that place is the reader (...). The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text's unity lies not in its origin but in its destination.<sup>28</sup>

Here, Barthes privileges the role of the audience in inscribing meaning and unity on the story. The distinction to make here is that interactive digital narratives require that the audience understand how successfully to navigate the storyspace of the narrative in order to internalize the storyworld. Narratives take place in audiences' minds through the stimulus of a storyspace<sup>29</sup> or through some mediated stimuli that has "narrativity" enough to inspire a narrative in the mind of the audience.<sup>30</sup> The elements used to mediate the narrative exist upon a continuum from the purely diegetic to the purely mimetic. Authors can tell a story, purely through mimetic elements—through visuals. If the narrative is visually mimetic—i.e. it is mediated through visual rather than textual means so that it represents rather than tells a story, something like a play or movie—the audience must recreate in their heads the storyspace of the

27 Söke Dinkla, "The Art of Narrative—Towards the Floating Work of Art," in *New Screen Media: Cinema/Art/Narrative*, edited by Martin Rieser and Andrea Zapp (London, England—Karlsruhe, Germany: British Film Institute—ZKM Center for Art and Media, 2002), 33.

28 Roland Barthes, *Image-Music-Text*, (London: Fontana Press, 1977), 142-143.

29 Ryan uses the term "narrative script" to describe an artifact designed to mediate a story of some type. I prefer the term storyspace, if only because the term script connotes a linear artifact that is textual in nature. Storyspace evokes better the spatial nature of games such as first person shooters.

30 Marie-Laure Ryan, "Multivariant Narratives," in *A Companion to Digital Humanities*, Edited by Susan Schreibman, Ray Siemens, and John Unsworth. (Malden, MA: Blackwell, 2004), 417.

narrative. Though uncommon, purely visual, mimetic mediations of narratives rely to varying degrees upon mimetic and diegetic elements to create stories that the audience internalizes. Were an audience member afterwards to describe their experience, they would create a new version of the storyspace based on this narrative. The audience recreates—or creates—this storyspace. Ryan’s characterizing these texts as containing a degree of “narrativity” helps to distinguish between the mediated narrative or *sjuzet*, the degree to which a narrative is narrative-like, and the actual narrative (that which takes place in the head of the audience). As a result, objects that have a degree of narrativity can provide the stimulus for a narrative to take place in the minds of the audience,<sup>31</sup> effectively blurring the audience with author and downplaying the importance of media in the act of storytelling. Narrative is not dependent on a specific medium, just the act of mediation.

### Storyspace, the Gap, and narrative

Space also helps to define a narrative, be it the space between letters, words, and sentences, or the gap between author and audience.<sup>32</sup> There are more gaps in a narrative than words. This notion of storyspace is a subset of “writing space,” to which Bolter refers as the “physical and visual field defined by a particular technology of writing.”<sup>33</sup> Writing spaces are “hard structures” associated with the tangible materials of writing such as the material page of a codex. Taking a cue from Marshall McLuhan, Bolter’s idea of “writing space” allows for those soft structures that emerge from the hard structures and govern our expectations of how elements on a page work together or relate to one another. For instance, the paragraph on the written page is a hard structure, yet it also is a soft structure in how it represents an organizational principle.<sup>34</sup>

On this writing space exist spaces between symbols (be they words, signs, or icons) and their meaning. Language operates through associating the signifier—the word—to the signified—the object. The order of words on a page,

31 Ryan “Multivariant” 417.

32 See Lev Manovich’s discussion of spatial narratives in *The Language of New Media*, 244-253.

33 Jay David Bolter, *Writing Space: Computers, Hypertext, and the Remediation of Print*, 2nd edition (Mahwah: Lawrence Erlbaum Associated Publishing, 2001), 12-13.

34 Jay Bolter, “Virtual Reality and the Redefinition of the Self,” in *Communication and Cyberspace: Social Interaction in an Electronic Environment*. 2nd ed. Edited by Lance Strate, Ronald L. Jacobson and Stephanie B. Gibson (Cresskill, NJ: Hampton Press, 2003), 105-119.

their relationship to one another in a line, creates meaning as well. Dog. The. Ate. Cat. The. The words, or signifiers, point toward objects, the signified, yet there is no order or meaning. Even after placing the words in a specific order, the audience still must make sense of them. They have to fill in the gaps between the words “The cat ate the dog” and lend this series of signifiers meaning.

How these words or objects on the writing space relate to one another (and hypertext through analogy) is defined as either a hypotactic or paratactic relationship. Hypotaxis is the “temporal, logical and syntactic relations between members and sentences are expressed by words (such as ‘when,’ ‘then,’ ‘because,’ ‘therefore’) and by phrases (such as ‘in order to,’ ‘as a result’) or by the use of subordinate phrases and clauses.”<sup>35</sup> Changing or omitting elements makes the sequence as a whole incomprehensible or changes the effect of the sequence.<sup>36</sup>

Parataxis is when “members within a sentence, or else a sequence of complete sentences, are put one after the other without any expression of their connection or relations except (at most) the noncommittal connective ‘and.’” An excellent example of parataxis in literary prose is Hemingway’s style. In *The Sun Also Rises* Hemingway writes, “It was dim and dark and the pillars went high up, and there were people praying, and it smelt of incense, and there were some wonderful big buildings.”<sup>37</sup> Notice the use of the conjunction “and,” as well as the lack of causality or chronology in the sentence. What is portrayed could essentially be seen as simultaneous. The only sense of chronology or causality given to the sentence is the linear sense of reading it (almost as though it were a camera panning), lending it a sense of chronology as though it were happening as we read it. No elements necessarily follow another. Either the reader makes the connection between elements or there is none. As opposed to the manner in which hypotaxis clarifies the chronological or causal relationship between elements, Parataxis relies upon “repetition rather than sequence” to make associations between elements.

In parataxis, “thematic units can be added, omitted, or exchanged without destroying the coherence or effect of

35 M. H. Abrams, Geoffrey Galt Harpham, *A Glossary of Literary Terms*. 8th edition. (Boston: Thomson Wadsworth publishing, 2005), 313.

36 An interesting question is whether these theories hold true as well for the relationship between visual objects. I assume in this paper that textual and visual objects in narratives are analogous enough for these theories to apply similarly.

37 M. H. Abrams, 313.

the [work’s] thematic structure.”<sup>38</sup> However, parataxis in narratives does affect the coherence of the narrative, due to what Emma Kafalenos terms as the “primacy effect.” The primacy effect is when the events that occur at the start of a text often shade how we read the following narrative.<sup>39</sup> For instance, our perception of a couple passionately kissing would change if this event took place after, rather than before, the funeral of their only child, killed in a fire. The audience must fill these gaps, bring some chronological order to the objects, and that order has an effect on the perception of that narrative.

Scott McCloud taxonomizes other forms of meaning created by the space between elements in a narrative—in this case the gutter in comic book frames.<sup>40</sup> McCloud’s taxonomy of the gutter illustrates how in order for meaning to take place, the audience has to project meaning into the gutter or link—to explain spatial relationships in essentially a linear, successive form, and fill the gap with meaning. However, when we examine a simultaneous rather than linear work, such as a painting or the layout of a page or a hypertext, we find that objects on this space or series of spaces take place in relationship to one another in a simultaneous, spatial (rather than linear and successive) manner. These spatial relationships in a narrative require an audience to lend them meaning as well—to fill in the gap and connect the different elements mediated by the author.

In negotiating a narrative, Wolfgang Iser astutely observed that narratives contain gaps that readers must fill in, in order to understand them, let alone create dynamic vivid narratives, and that “the reader’s activity must also be controlled in some way by the text.”<sup>41</sup> To come to terms with and understand the storyworld, the audience must negotiate and understand the storyspace—and the storyspace must in turn control the manner in which the audience interacts with it. In a traditional print narrative, understanding the storyspace is quite simple. When applied to textual narratives, elements come to follow a linear model, in which the narrative unfolds successively. The author and audience

38 Barbara Herrnstein Smith, *Poetic Closure*, pp. 99-100, as quoted in in Landow’s *Hypertext 2.0. The Convergence of Contemporary Critical Theory and Technology*. Baltimore: Johns Hopkins Press, 186-7.

39 Abbott 81-2.

40 Meadows refers to Scott McCloud’s *Understanding Comics*, p. 90. McCloud, Scott. *Understanding Comics (The Invisible Art)*. Kitchen Sink Press, 1999.

41 Wolfgang Iser, “Interaction between Text and Reader,” in *The Reader in the Text: Essays on Audience and Interpretation*, edited by Susan R. Suleiman and Inge Crossman (Princeton: Princeton University Press, 1980), 106-119.

abide by the long-standing conventions of print in creating and reading the “writing space” that is the material text of the narrative. Because of these print narrative conventions, the audience often arrives at the elements that comprise the narrative linearly, easily comes to terms with and understands the relationship of these elements, and forms an idea of how these elements relate to one another. This conception is the audience’s internalization of the storyspace. In so doing, the audience comes to understand how these elements comprise the storyworld, and in so doing, negotiate the narrative.

How audiences create meaning in hypertextual narratives mirrors the audience coming to terms with a gap and adds an additional step to the process in which they come to negotiate a narrative. The *lexia* are the collection of words (and images, sounds, motions) that comprises the building blocks of the hypertext story. Then the links provide the means of navigating between *lexia* and hold together the hypertext narrative through their absence. Look at a map of a hypertext and all of its possible paths. View the hypertext spatially and you see the space that it holds. The emptiness. While meaning comes from the objects on the *lexia*, just as much can come from navigating the links.

### Fabula, Digi-fabula, and Sjuzet

In traditional textual, unicursive narratives, narratologists name what is actually written down or mediated—the textual artifact of the narrative—as the *sjuzet* (I instead use the term storyspace). The potential of the story (not necessarily what the audience experiences nor what is actually mediated) is the *fabula*. The narrative is what is actually experienced by the audience. The three ideas are different and point to the role that mediation plays, but this notion of mediation is very much rooted in the assumptions of a specific medium—print technology. Hypertexts and any computer-mediated, interactive narratives don’t necessarily follow the same structure. Margarete Jahrman notes:

Any piece of computer software exists on two levels. On the one hand, it exists as an executing programme [sic] supporting some sort of activity or generating some sort of experience. On the other, it exists as a text in its own right, a subject expression of the writer’s ideas and an example of one person’s struggle to give form and function to an idea in the particular medium/language of

executable code. The human reader has an immediate and direct relationship to the ‘source text’ of a poem or novel, rendering it into an imagined experience using their comprehension of language, their memories, and their life experiences. On the other hand, a computer programme’s text is generally hidden, interpreted by the processor, operating system, and hardware before being presented to the audience. But the inaccessibility of the programme’s source code does not make the code text itself culturally irrelevant. In the case of executable computer code, some of the interpretative activity is shifted away from the human into the machine/code system.<sup>42</sup>

To interpret and discuss the narrative, we can look at the code, requiring in critics the aptly phrased procedural literacy detailed by Mateas.<sup>43</sup> Mateas argues that to understand how a digital work—a work rooted in code—critics should understand code. Doing so, however, could emphasize only one part of a work the written code, which is seldom experienced or seen by the audience. They usu-

Disorientation occurs when the audience can’t fit the elements encountered in the storyspace into their understanding of its structure. These elements or spaces appear to fall outside the narrative path or cause them to veer outside of the narrative path.

ally only experience what appears on the screen or through the speakers. Focusing solely on the code ignores the interactivity, the inventiveness, and the authority of the audience in bringing about the interactive text.<sup>44</sup>

In interactive narratives, what is written or fixed—the code—is not really the *sjuzet* or the narrative script

42 Jahrmann, Margarete. “Mediapoiesis, autopoietic compiling, and code critique in the technological narrative: narratives of the code.” *Networked Narrative Environments as Imaginary Spaces of Being*. Edited by Andrea Zapp. Manchester: Manchester Metropolitan University Press, 2004, p. 132.

43 Michael Mateas, “Procedural Literacy: Educating the New Media Practitioner,” <http://www.lcc.gatech.edu/~mateas/publications/MateasOTH2005.pdf> (accessed July 23, 2008).

44 While Aarseth claims that “When the relationship between surface sign and user is all that matters, *the unique dual materiality of the cybernetic sign process is disregarded*” (Aarseth 40, italics his).

because it is not really the end-point in the narrating process. The narrative is mediated through symbolic forms of one shape, type, or another and requires the reader’s interaction with the narrative to play out the story on the computer screen. It’s the pixels played out on the screen, the sounds heard through the speaker and the interface that mark the act of mediation, not the code.<sup>45</sup> The code represents what I term the *digi-fabula* that forms the interactive possibility of the text and allows for the mediation of the narrative, but the actual mediating of the story, the *sjuzet*, is what is actually experienced by the audience—the pixels on the screen—and not the code. The gap that exists requires the audience’s interaction to create some form of narrative meaning.

In hypertext and other interactive digital media, the narrative elements experienced by the audience might create “discordance” and “disorientation.” By discordance, I mean visual, textual, or other modal elements on the storyspace that appear to be at odds with the unity of the storyworld. The visual and textual elements might appear to be odds

due to an act of under-reading, when in fact they are furthering the narrative. The audience must take these elements and associate them to the work in ways that create a chronological or causal relationship. Noise or digressions exist as well, in that errors or elements that are not part of the storyworld are introduced into the work. The audience is guilty of over-reading if they view as integral to the storyworld these elements which actually don’t belong. The audience might also understand that noise or digressions actually fall outside of the narrative arc. Given most audiences’ propensity for desiring closure, they are more likely to be guilty of over-reading.

Disorientation occurs when the audience can’t fit the elements encountered in the storyspace into their understanding of its structure. These elements or spaces appear to fall

45 Aarseth, 40.

outside the narrative path or cause them to veer outside of the narrative path. The audience either can’t understand how these elements in the storyspace further their understanding of the storyworld or they are inability to navigate the storyspace causes a failure in their narrative experience. They can’t proceed in the narrative. Usability and web design professionals refer to the audience’s overall understanding of the site (and where they are in it) as the mental map of the site. The audience assumes that the work forms a unified whole and attempts to place themselves within this space. Veen’s three questions of web design, “where am I?, what’s here?, where can I go?,”<sup>46</sup> recognize this spatialized understanding of hypertextual forms like websites. The navigational design feature of many sites, the Breadcrumb trail, helps illustrate this idea, mapping out where the user currently is in a site. Tabbed navigation functions similarly. The disorientation of hypertextual forms demonstrates a movement away from the clearly recognized writing space of codex mediated narratives towards relatively uncharted digital storyspaces.

This brings me to the metaphor of architectural space. In a book, the traditional linear, successive navigation scheme has been a convention almost since before the invention of the codex. Hypertextual or visually mimetic, interactive digital narratives/games evoke an experience that is somehow unique from traditional narratives. While the purpose of any narrative is to communicate perspective, visually mimetic video games (that actually mediate a story) create a sense of space and form that is quite unique in the degree to which the audience can wander along the much broader path of the narrative arc.<sup>47</sup> The movement through space in a building, such as the Parthenon or a cathedral, creates a storyspace similar to that of an interactive text such as a hypertext or video game.

This storyspace forms the basis in which the audience moves about the work. Their movement through this space, the path that they take and the actions they commit, is the story path that forms the narrative arc of the storyworld experienced by the audience<sup>48</sup> and allows the audi-

46 Jeffrey Veen, *The Art and Science of Web Design* (Indianapolis: New Riders, 1997), 48-51.

47 This conceptual space creates for the audience a space for acting- or *handlungsfelder*. Jahrmann, 36.

48 Critics such as Henry Jenkins have created a smaller narrative- the micronarrative- to explain the narrative process in video games (125). I don’t think that micro-narratives are a profitable categorization, however, in that doing so denigrates the narrative structure of the work as a whole. Instead, we could say, as others have, that the narrative is more episodic in nature.

ence to better understand the storyspace, learn the rules of this space, and enact with the storyworld. The audience bases their mental map of the storyspace both on their explorations and on “information drawn from textual cues and clues.”<sup>49</sup> The interactivity of the site and the process of exploration require that the audience member form hypotheses about the space, the rules, and the storyline, and then test their validity:

As they move through the film, spectators test and reformulate their mental maps of the narrative action and the story space. In games, players are forced to act upon those mental maps, to literally test them against the game world itself. If you are wrong about whether the bad guys lurk behind the next door, you will find out soon enough—perhaps by being blown away and having to start the game over.<sup>50</sup>

Those storyspaces that facilitate the audience’s ready navigation and adequately convey the rules of the storyworld provide for a greater possibility of a satisfactory narrative arc through the storyspace.<sup>51</sup> These new interactive, digital narrative forms also allow a storyspace broader than textual narrative storyspaces and through which individuals can map out their own personal narrative arcs, mediating their own narrative through their own actions, choices, or navigation.

This broader potential narrative arc allows for the exploration of what were once considered extradiegetic spaces—material in the storyworld that falls outside of the narrative arc of traditionally mediated stories. For instance, the war in Vietnam figures into the extradiegetic space of *Easy Rider*.<sup>52</sup> The film does not overtly touch on it, but the war is part of the historical context of the story. Traditional narratives constrain the audience’s path along a narrative arc and as a result the storyspace in which they negotiate the narrative is far more constrained; whereas digital media (narratives mediated through hypertext and video games) allow the audience to explore more of the storyspace—

49 Henry Jenkins, “Game Design as Narrative Architecture,” in *First Person: New Media as Story, Performance, and Game*, edited by Noah Wardrip-Fruin and Pat Harrigan (Cambridge, Mass.: MIT Press, 2004).

50 Jenkins, 126.

51 Works such as Crawford’s and Glassner’s discuss how to create interactive storytelling. Chris Crawford. *On Interactive Storytelling*. (Berkeley, CA: New Riders Games, 2005) and Glassner, Andrew. *Interactive Storytelling: Techniques for 21st Century Fiction*. (Wellesley, MA: AK Peters, Ltd, 2004).

52 *Easy Rider*, directed by Dennis Hopper, 1969.

and hence the storyworld. In moving about these formerly extradiegetic spaces of the storyspace, the audience transforms this time and space into part of the narrative arc they realize. They can discover more about the back-story of the narrative or get a better sense of the storyworld's setting and the storyspace's layout.

This exploration of the digital storyspaces—which encompasses both the diegetic and formerly extradiegetic storyspaces of traditionally mediated narratives—provides closure for the narrative and links back to the joke in the introduction. Closure, as Janet Murray defines it, occurs when the audience understands the structure of the storyspace:

Electronic closure occurs when a work's structure, though not its plot, is understood. This closure involves a cognitive activity at one remove from the usual pleasures of hearing a story. The story itself has not resolved. It is not judged as consistent or satisfying. Instead, the map of the story inside the head of the reader has become clear.<sup>53</sup>

Murray's differentiating between electronic and narrative closure establishes a needed delineation between the narrative and the artifact of mediating that narrative between the storyworld and storyspace, recognizing the unique and essentially unruly media that is digital, interactive works. If predominantly visually mimetic narratives have indeed become spatialized, wouldn't narrative closure depend on electronic closure? If so, how do the two relate?

First, with architectural space it is not enough to consider just the three dimensional space defined by the edifice. Time is as an integral part of experiencing architectural space as it is of narrative. Narratives are events that unfold over time; they are chronologically linked. So too is movement through space. Any experience of a space is four dimensional, unfolding over time. Any consideration of digital storyspace should extend this notion of four dimensions as well. The path through the narrative landscape that is the storyspace of a digital, interactive work is still the linear path of the traditional, post-Gutenberg narrative, but it takes place in the architecturally ordered space mapped out over time in the mind of the audience.

53 Murray *Hamlet on the Holodeck*, 174.

Second, it is often not enough for the audience to map out this storyspace to achieve narrative or electronic closure. The audience must also come to discover, understand and follow the rules under which this world operates. In this way, the rules of navigating the storyspace (glowing objects are usable) or that govern the storyworld (objects fall down not up, antagonists will always attempt to attack your character) are types of soft structures linked to the design decisions of the hard structure of the narrative (the storyspace as a physical artifact that mediates the narrative). Whether the rules are the rhetoric of the links that the audiences must follow or the physics model of the world, the audience must follow these rules to achieve a degree of closure in any narrative sense.<sup>54</sup> Most audiences do this every time they read a novel, for one of the rules for navigating the codex requires readers to start at the beginning and read their way through the middle to the end. But digital media, with its raw, unformed, convention breaking forms, doesn't allow most of what we take to be convention to apply, although it too is developing its own media-specific soft-structures.

For an interactive hypertext or video game narrative to create a successful narrative structure represented by Freytag's pyramid, the interactive space must direct the audience in their explorations through what I call the rhetoric of digital space. For the narrative act to take place, the audience must move through the digital space in such a way to construct a series of events that can be placed in chronological order and establish a causal relationship between the events in the text (what Miller calls the "critical story path").<sup>55</sup> The work must usually facilitate electronic closure—allowing the audience to understand the storyspace of the work—in order to achieve narrative closure (through filling the causal and chronological gaps of the narrative). To do so requires that the audience understand and follow this storyspace's geography and rules.

The plot in a digitally mediated narrative—be it hypertext or video game—unfolds as a function of the perceptual

54 Espen Aarseth defines three areas common to all games—game-play, game-world, and game-structure in his paper, "Playing research" Methodological approaches to game analysis," presented at the Melbourne DAC 2003, p. 2.

55 Carolyn Handler Miller, *Digital Storytelling: A Creator's Guide to Interactive Entertainment* (Burlington, MA: Focal Press, 2004), 125.

and conceptual space.<sup>56</sup> "Hypertextual ways of working, of course, invite us both as authors and users to experience information as a spatial arrangement. We are called upon to navigate the database in order to make sense of what is stored within."<sup>57</sup> As Dovey maintains, rather than taken on a journey, we are invited to explore a space.<sup>58</sup> But the information itself is not spatial—it's only the illusion of space that we navigate—there is no space to the data. It is this conceptual or perceived space that we need to understand—the audience's interaction with database elements played out across the screen creating the portrayed space—and the perceived or cognitive space within the mind of the audience.

### Spatial Storytelling—Creating Storyspaces in which Narratives Unfold

Creating compelling narrative arcs in interactive media requires a novel combination of skills and devices, many of which predate the invention of digital media. With precursors found in fields as diverse as architecture, wayfinding, interior decorating and theme-park construction, spatial storytelling provides a varied means of creating a satisfying narrative experience. Henry Jenkins' article "Game Design as Narrative Architecture" frames his idea of what he calls environmental storytelling through the experience and theories of the theme park designer Don Carson:

Environmental storytelling creates the preconditions for an immersive narrative experience in at least one of four ways: spatial stories can evoke pre-existing narrative associations; they can provide a staging ground where narrative events are enacted; they may embed narrative information within their mise-en-scene; or they provide resources for emergent narratives.<sup>59</sup>

56 Bolter categorizes space into three groups: physical, perceptual, and conceptual. "Physical space is that which exists independent of humans. Perceptual space is what the audience perceives and is usually multi-modal, whereas conceptual space is our understanding of this space—sometimes not even seen. Jay Bolter, "Virtual Reality and the Redefinition of the Self," in *Communication and Cyberspace: Social Interaction in an Electronic Environment*. 2nd ed. edited by Lance Strate, Ronald L. Jacobson and Stephanie B. Gibson. (Creskill, NJ: Hampton Press, 2003).

57 Jon Dovey, "Notes Toward a Hypertextual Theory of Narrative," in *New Screen Media: Cinema/Art/Narrative*, edited by Martin Rieser, Andrea Zapp, —and Timothy Duckrey (London, England--Karlsruhe, Germany: British Film Institute--ZKM Center for Art and Media, 2002), 140.

58 Dovey 142.

59 Jenkins, 123.

Valve, the producer of the Half-Life videogame series, follows these same precepts in their design process, designing their games in spatial rather than temporal terms. As Ken Birdwell, a game designer for Valve describes:

Since we couldn't really bring all these experiences to the player (a relentless series of them would just get tedious), all content is distanced based, not time based, and no activities are started outside the player's control. If the players are in the mood for more action, all they need to do is move forward and within a few seconds something will happen.<sup>60</sup>

Because spatial storytelling allows for the exploration of what had formerly been the extradiegetic storyspace of traditionally mediated narratives, digital, interactive, mimetic storyspace has the potential of allowing for a greater degree of interactivity or movement outside of the storypath, which essentially conflates the two; transforming potentially marginal extradiegetic storyspaces into spaces central to the narrative as it is mediated to (and experienced by) the audience and creating an opportunity to discover more about the setting and the backstory of the storyworld. Spatial storytelling can result in the plot structure of spatial narratives not being as tight or focused as linear narratives (although, for that matter, not all linear narratives are tightly focused). As a result, spatial narratives often emphasize the experience—the setting and mood and the interaction with objects and characters (in First Person Shooters usually through killing them). As Jenkins notes, "Spatial stories are not badly constructed stories; rather, they are stories which respond to alternative aesthetic principles, privileging spatial exploration over plot development."<sup>61</sup> Think of the contemplative and eerily vacant landscape of the video game *Myst*. This is the archetypal model of the spatialized narrative, in that nearly all of the narrative is represented as a space to be explored, it downplays the development of round characters, doesn't actually emphasize action as much as it does exploration, and requires that the audience come to discover and understand the rules of both the storyspace and storyworld in order to unlock all of the storyspace—thereby achieving a degree of closure to the narrative and, if the rules are in fact understood, a satisfactory denouement.

60 Ken Birdwell, "The Cabal": Valve's Design Process for Creating Half-Life," in *Gamasutra*. December 10, 1999. [http://www.gamasutra.com/features/19991210/birdwell\\_01.htm](http://www.gamasutra.com/features/19991210/birdwell_01.htm) (accessed July 23, 2008).

61 Jenkins, 124.

ment for the story arc. Time is present both in the movement through the different settings and in the cut-scenes in which the audience hears the brothers (and the father) speak from the books.<sup>62</sup>

### The Rhetoric of Digital Space

In spatial storytelling, where authors attempt to prompt or constrain the audience in their movement through the storyspace and to bring about a degree of electronic and narrative closure for these audiences, authors attempt fold this rhetoric of digital space into the storyspace and storyworld of the narrative in six general loci: Mimetic, Diegetic, Deep, Hard, Disruptive, and Paramediated loci. Of course, these loci easily overlap, particularly since the very nature of digital media allows for the blurring of lines.

This rhetoric is particularly important in understanding how audiences navigate primarily mimetic, interactive digital narratives.<sup>63</sup> In such a work, the author must set the rules for interactivity, design the storyspace and establish the storyworld for the audience, and in cases in which the game is attempting to repurpose the story of a film or novel, the audience must place the game within the storyworld of the other work. As Jesper Juul points out, this is the purpose of “the titles, intro sequences and cut scenes work... Their purpose is to explain to the player, why this platform game is at all related to the movie *The Lion King*, why this 3D flying game is related to *Top Gun*. Because it is not clear from the game itself.”<sup>64</sup>

First, mimetic rhetorical loci are those spaces represented by the storyspace and that further the storyworld. In this category is all that is represented as part of the storyworld—the characters, dialog, setting, and the audience’s interactions with the world as they are represented, as opposed to narrated, on the screen or heard through the speakers. Here, the space (and characters that populate this space) prompt or limit actions. For instance, the design of the space might constrain movement or choice, forcing the audience to choose specific paths, behaviors, or items

(such as occurs in many first person shooters). Mimetic rhetorical forms also rely upon cut-scenes to remove the control from the audience and to convey dramatic tension, characters, and events to the audience:

The heavy-handed exposition that opens many games serves a useful function in orienting spectators to the core premises so that they are less likely to make stupid and costly errors as they first enter into the game world. Some games create a space for rehearsal, as well, so that we can make sure we understand our character’s potential moves before we come up against the challenges of navigating narrational space.<sup>65</sup>

We see this also in the design of a First Person Shooters such as *Half-Life 2*,<sup>66</sup> in which the designers weave clues regarding paths and behaviors into the setting or character interactions. The burnt corpse by the blackened door might be a cautionary tale for the audience—open at your own risk.

Second, diegetic rhetorical loci are outside the mimetic storyspace but are still part of the storyworld and attempt to control or afford behavior through narration or the background of the storyworld. The rhetoric that takes place in these loci of the storyspace still attempts to create the illusion of a coherent storyworld, but is not necessarily represented. Narration that explains events or contextualizes the story, such as the narration that opens the *Star Wars* films, is one example. This narration forms the idea of the storyworld, but is not a representation of that storyworld. Most galaxies don’t have a series of sentences that scroll off toward a vanishing point in space, yet the narration helps explain the world. Similar narration exists in video games. Each storyworld also has its own set of rules by which its universe operates, as well as a degree of history and geography outside of the represented space, yet still informing that space yet in the storyworld. These rules help the audience understand the possibilities of the storyspace and help contextualize the storyworld. For instance, in the game *Call of Duty 2*,<sup>67</sup> World War II forms part of the narrative and this back-story helps shape the audience’s behaviors. As a character who is a member of the Allies, the back-story helps shape audience behaviors (attempt to kill Axis soldiers) while subtitles might inform the audience that the scene takes place in Moscow or that the temperature is minus 20 Celsius.

62 *Myst*. Broderbund. 1995.

63 Although it could also possibly serve to understand the operation of interactivity in informative and exhortative digital spaces (such as webpages), I would be particularly interested to see how well or in what forms the rhetoric of digital space might apply to experiential design in real spaces.

64 Jesper Juul, “A Theory of the Computer Game.” <http://www.jesperjuul.net/thesis/4-theoryofthecomputergame.html> (accessed July 23, 2008).

65 Jenkins, 126.

66 *Half-Life 2*. Valve, 2006.

67 *Call of Duty 2*, Activision Publishing, Inc., 2005.

the storyspace (i.e. all are usually mediated separately from the storyspace, such as the printed manual, the HTML the cheat files, etc.). These are forms such as help files, cheats, manuals, and instructions. Sometimes these are folded in the storyspace. Other times they’re not. All usually facilitate audience navigation through the storyspace, advise the audience of rules, and/or provide needed back-story for the storyworld.

### Forced and Enabling

These loci allow for rhetorical forms that either enable choices in actions or narrative paths or force choices or paths.<sup>69</sup> Enabling interactivity that furthers a mimetic narrative would include the highlighting of those interactive or actionable items in a space or the blue underscore of a hypertext link. These examples of enabling rhetorical forms are interaction markers and choice markers both of which communicate to the audience the presence of an actionable item or indicate a choice or path. The best and most widely cited example of narratives forcing interactivity is the cut scene—often used in the string of pearls design. In this instance, the user is given opportunities to interact until the cut-scene comes into play, at which time the user has no control over the outcome of this narrative. Both forced and enabling allow, and at the same time inhibit, actions; being enabled to make two choices (or one hundred, or one thousand) inhibits other choices not enabled in the narrative. Of course, these uses are often either folded into the storyspace of the storyworld and are experienced as part of representation of the narrative (mimetic), or they are told to the audience (diegetic), or they are disruptive to the flow of the story.

Third, deep rhetorical loci incorporate rhetorical forms into the code. The constraints or opportunities placed on audience interaction through coding exist in the *digi-fabula* and outside of the represented diegetic storyspace mediated to the audience. It is that which is not represented, yet still constrains or affords actions. For a rule bound system in which interactivity is an integral part, code is central to the unfolding of the narrative, yet is never actually represented on screen.

Fourth, hard rhetorical loci recognize the effect hardware and input devices have in allowing for audience interactivity/behaviors with the storyspace and how the storyworld is represented. For instance, there are only so many buttons on a joystick or mouse. All interaction with (and within) the narrative must be funneled through the input device and mediated through the output device(s). The possible behaviors mapped onto these devices by the author both afford and constrain interaction within the narrative. Beyond mapping specific behaviors onto the device, the physical structure of the input device and the monitor (as well as operating system and hardware) are usually outside of the scope of the author to change, yet these items play a part in audience interaction with the storyspace.

Fifth, disruptive rhetorical loci are those spaces in which occur visual or auditory cues that break the verisimilitude of the storyworld in attempting to control or enable audience behavior. The pop-up message box that asks whether a user wants to quit or that requests that the user download the newest application to view the document are examples. Probably the most readily apparent disruptive rhetorical form is the interface. While hypermediacy is becoming more accepted<sup>68</sup> and sometimes the designers attempt to blend the interface into the storyspace in some manner (for example the heads up display interface that ostensibly forms the perspective of the character), in most cases the audience has to accept (and incorporate into the storyworld) the disruptive effects of these rhetorical forms.

Sixth, paramediated rhetorical loci are those objects that inform us how to play the game or read the hypertext and that normally occur outside of the medium used to convey

68 An important side-note is that many works have conflated disruptive, mimetic and diegetic loci. As Bolter and Grusin’s discuss in *Remediation*, those instances of immediacy (which would usually fall into the diegetic or mimetic loci) are increasingly open to disruption as hypermediacy is becoming more an accepted part of the communication process. Bolter and Grusin, *Remediation*, 30-31.

69 Greg M. Smith, in his “Introduction: A few words about interactivity” assigns to interactivity solely the role of “restrict[ing] and set[ting] boundaries on the sequence of actions” (24) I have chosen to widen his definition to include enabling as well as inhibiting. While I recognize the validity of the claim that to inhibit is essentially the same as to enable, I choose to steer away from the Old-Testament tones implicit in this view of interactivity. Rather than see the author’s role in interactivity as the sage stating “thou shalt not,” philosophically I see the authors’ role as both affording choices and implicit in those choices offered, inhibiting. Greg M. Smith, “Introduction: A Few Words About Interactivity,” in *On a Silver Platter: CD-ROMS and the Promises of a New Technology*, edited by Greg M. Smith (New York: New York University Press, 1999), 1-34.

Perhaps because of the influence of the interactor on the text, these ideas of an implied author and a unified text are changing. The idea of a unified whole is no longer necessarily the norm. Consider the way that television now tells stories—the mélange of cuts and clips that compose shows such as *Talk Soup*—a compilation of small pieces. There is no coherent whole to the show—and it is not really a unified narrative but rather a series of glimpses of what goes on on television.<sup>70</sup> We read in snippets and view in glimpses and our storytelling is beginning to show it—particularly in post-modern literature or in the more visual media like television. *Lost*<sup>71</sup> is a good example. The show traces its story-arc through the multiple perspectives and scenes. Film as well. Think of the snippets of scenes that compose the movie *Syriana*.<sup>72</sup> Obviously, Stuart Moulthrop's *Victory Garden*, Michael Joyce's *Afternoon: A Story*, and Shelley Jackson's *Patchwork Girl*<sup>73</sup> aptly exemplify hypertextual commentaries on this trend. In each of these media, storytelling is taking place in little snippets or glimpses, which taken as a whole, amount to an idea of a unified whole, like a collage. Yet the audience attempts to assemble these snippets and glimpses into a coherent whole. This manner of storytelling is not new. Consider episodic narratives. More particularly, consider the multi-vocality of James Joyce's *Dubliners*.<sup>74</sup> Both attempt to get beyond the veil of linear storytelling and to mediate a sense of place through multiple perspectives and multiple narratives. Yet the narrative urge of which Ker-mode spoke still exists and still operates in our consciousness, bringing a degree of closure to such works. We view a series of events, text, images, or lexia and we attempt to connect them causally and chronologically. We are offered a gap, and we attempt to fill it. In order to better create a more satisfactory narrative, well-constructed interactive works require a rhetoric of digital space that allows the audience to navigate better the storyspaces of interactive digital narratives.

70 James Gleick, "Prest-o! Change-o!" in *Living in the Information Age: A New Media Reader*, 2nd edition, edited by Erik P. Bucy (Belmont, CA: Thomas Wadsworth, 2005), 148.

71 *Lost*, ABC, 2005-.

72 *Syriana*, directed by Stephen Gaghan, 2005.

73 Stuart Moulthrop, *Victory Garden* (Watertown, MA: Eastgate Systems, 1999); Michael Joyce, *Afternoon, a Story*, 5th ed. (Watertown, MA: Eastgate Systems, 1995); Shelley Jackson, *Patchwork Girl* (Watertown, MA: Eastgate Systems, 1995).

74 James Joyce, *Dubliners* (New York: Penguin Books Ltd, 2000)

## References

- Aarseth, Espen. "Quest Games as Post-Narrative Discourse." In *Narrative Across Media: The Languages of Storytelling*, edited by Marie-Laure Ryan, 361-76. Lincoln, NE: U of Nebraska Press, 2004.
- Aarseth, Espen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore: Johns Hopkins Press, 1997.
- Abbott, H. Porter. *The Cambridge Introduction to Narrative*. Cambridge: Cambridge University Press, 2002.
- Abrams, M. H., Harpham, Geoffrey Galt. *A Glossary of Literary Terms*. 8th edition. Boston: Thomson Wadsworth Publishing, 2005.
- Barthes, Roland. "The Death of the Author." In *Image, Music, Text*, 142-148. New York: Hill and Wang, 1988.
- Bernstein, Mark. "Patterns of Hypertext." Eastgate Systems Inc. 1998 <http://www.eastgate.com/patterns/Print.html> (accessed July 23, 2008). (reprinted from *Proceedings of Hypertext '98*, Frank Shipman, Elli Mylonas, and Kaj Groenback, eds, ACM, New York.)
- Birdwell, Ken. "The Cabal: Valve's Design Process For Creating Half-Life." In *Gamasutra*. December 10, 1999. [http://www.gamasutra.com/features/19991210/birdwell\\_01.htm](http://www.gamasutra.com/features/19991210/birdwell_01.htm). (accessed 10/31/06). (originally published in *Game Developer*.)
- Bolter, Jay David, and Richard Grusin. *Remediation: Understanding New Media*. Cambridge: MIT Press, 2000.
- Bolter, Jay David. "The Rhetoric of Interactive Fiction." In *Texts and Textuality: Textual Instability, Theory, and Interpretation*, edited by Philip Cohen, 269-90. New York, NY: Garland, 1997.
- Bolter, Jay David. *Writing Space: Computers, Hypertext, and the Remediation of Print*. - 2nd Ed. Mahwah, NJ: Lawrence Erlbaum Associates, 2001.
- Bolter, Jay. "Virtual Reality and the Redefinition of the Self." *Communication and Cyberspace: Social Interaction in an Electronic Environment*. 2nd, edited by Lance Strate, Ronald L. Jacobson and Stephanie B. Gibson. Cresskill, 105-119. NJ: Hampton Press, 2009.
- Bush, Vannevar. "As We May Think." In *The Atlantic Monthly*. 176, (1) (1945): 101-108.
- Call of Duty 2*. Activision Publishing, Inc. 2005.
- Crawford, Chris. *On Interactive Storytelling*. Berkeley, CA: New Riders Games, 2005.
- Douglas, J. Yellowlees. "'How Do I Stop This Thing?': Closure and Indeterminacy in Interactive Narratives." In *Hyper/Text/Theory*, edited by George P. Landow, 159-188. Baltimore: Johns Hopkins UP, 1994.
- Dovey, Jon. "Notes Toward a Hypertextual Theory of Narrative." In xxxii, 335 pp.; *New Screen Media: Cinema/Art/Narrative*. edited by : Rieser, Martin Rieser, (ed. and foreword)--Zapp, AndreaZapp, (ed. and foreword)--Duckrey, Timothy Duckrey. London, England--Karlsruhe, Germany: (preface); British Film Institute--ZKM Center for Art and Media, London, England--Karlsruhe, Germany, 2002: 135-45.
- Easy Rider*. Directed by Dennis Hopper, 1969.
- Eskilinen, Markku. "The Gaming Situation." In *Game Studies*. Vol. 1, no. (1). <http://www.gamestudies.org/0101/eskilinen/> (accessed

July 23, 2008).

Glassner, Andrew. *Interactive Storytelling: Techniques for 21st Century Fiction*. Wellesley, MA: AK Peters, Ltd., 2004.

Gleick, James. "Prest-o! Change-o!" In *Living in the Information Age: A New Media Reader*. Second edition. edited by Erik P Bucy, 146-150. Belmont, CA: Thomas Wadsworth, 2005.

*Half-Life 2*. Valve. 2006.

Harpold, Terry. *Links and Their Vicissitudes: Essays on Hypertext*. *Dissertation Abstracts International* 56, no. 3 (1995 Sept): p. 916A. *Dissertation*: U of Pennsylvania, 1994.

Iser, Wolfgang. "Interaction between Text and Reader." In *The Reader in the Text: Essays on Audience and Interpretation*, 106-119. Princeton: Princeton University Press, 1980.

Jackson, Shelley. *Patchwork Girl*. Watertown, MA.: Eastgate Systems, 1995.

Jahrmann, Margarete. "Mediopoiesis, Autopoietic Compiling, and Code Critique in the Technological Narrative: Narratives of The Code." In *Networked Narrative Environments as Imaginary Spaces of Being*, edited by Zapp, Andrea Zapped. Manchester: Manchester Metropolitan University Press, 2004.

Jenkins, Henry. "Game Design as Narrative Architecture." (and other texts). In *First Person: New Media as Story, Performance, and Game*, edited by Noah Wardrip-Fruin and Pat Harrigan. Cambridge, MA.: MIT Press, 2004.

Joyce, Michael. "Siren Shapes: Exploratory and Constructive Hypertext." In *Academic Computing* (November, 1988).

Joyce, Michael. *Afternoon, A Story*. 5th ed. Watertown, Mass.: Eastgate Systems, 1995.

Juul, Jesper. "A Theory of the Computer Game." <http://www.jesperjuul.net/thesis/4-theoryofthecomputergame.html> (Accessed July 23, 2008).

Landow, George P. "Relationally Encoded Links and the Rhetoric of Hypertext." In *Hypertext '87 Proceedings*, 331-344. Baltimore: Association for Computing Machinery, 1987.

Landow, George P. "The Rhetoric of Hypermedia: Some Rules for Authors." In *Hypermedia and Literary Studies*, edited by G. P. Landow and P. Delany. Cambridge: MIT Press, 1990.

Landow, George P. *Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology*, 2nd edition. Baltimore: Johns Hopkins Press, 1997.

*Lost*. ABC. 2005-.

Manovich, Lev. *The Language of New Media*. Cambridge, MA.: MIT Press, 2002.,

Mateas, Michael. "Procedural Literacy: Educating the New Media Practitioner." <http://www.lcc.gatech.edu/~mateas/publications/MateasOTH2005.pdf>. (Accessed July 23, 2008).

McCloud, Scott. *Understanding Comics (The Invisible Art)*. Amherst, MA: Kitchen Sink Press, 1999.

Meadows, Mark Stephen. *Pause and Effect: The Art of Interactive Narrative*. Indianapolis: New Riders Press, 2003.

Miller, Carolyn Handler. *Digital Storytelling: A Creator's Guide to Interactive Entertainment*. Burlington, MA: Focal Press, 2004.

Moulthrop, Stuart. *Victory Garden*. Watertown, MA.: Eastgate

Systems, 1999.

Murray, Janet. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge MA: MIT Press, 1997.

Myst. Broderbund. 1995.

Prince, Gerald. *Dictionary of Narratology*. Lincoln: Univ of Nebraska Press, 2003.

Ryan, Marie-Laure. "Beyond Myth and Metaphor: Narrative in Digital Media." In *Poetics Today - Volume 23, Number (4), Winter 2002*. 581-609.

Ryan, Marie-Laure. "Cyberspace, Virtuality, and the Text." In *Cyberspace Textuality: Computer Technology and Literary Theory*, edited by Marie-Laure Ryan, 78-107. Bloomington: U of Indiana Press, 1999.

Ryan, Marie-Laure. "Introduction." In *Cyberspace Textuality: Computer Technology and Literary Theory*, edited by Marie-Laure Ryan, 1-28. Bloomington: U of Indiana University Press, 1999.

Ryan, Marie-Laure. "Introduction." In *Narrative Across Media: The Languages of Storytelling*, edited by Marie-Laure Ryan, 1-40. Lincoln and London: University of Nebraska Press, 2004.

Ryan, Marie-Laure. "Multivariant Narratives." In *A Companion to Digital Humanities*, edited by Susan Schreibman, Ray Siemens, and John Unsworth, 415-30. Malden, MA: Blackwell, 2004.

Ryan, Marie-Laure. "Will New Media Produce New Narratives?" In *Narrative Across Media: The Languages of Storytelling*, edited by Marie-Laure Ryan, 337-360. Lincoln and London: University of Nebraska Press, 2004.

Slatin, John M. "Reading Hypertext: Order and coherence in a new medium." In *Hypermedia and Literary Studies*, edited by G. P. Landow and P. Delany, 153-169. Cambridge: MIT Press, 1995.

Smith, Greg M. "Introduction: A few words about interactivity." In *On a Silver Platter: CD-ROMS and the Promises of a New Technology*, edited by Greg M. Smith, 1-34. New York: New York University Press, 1999.

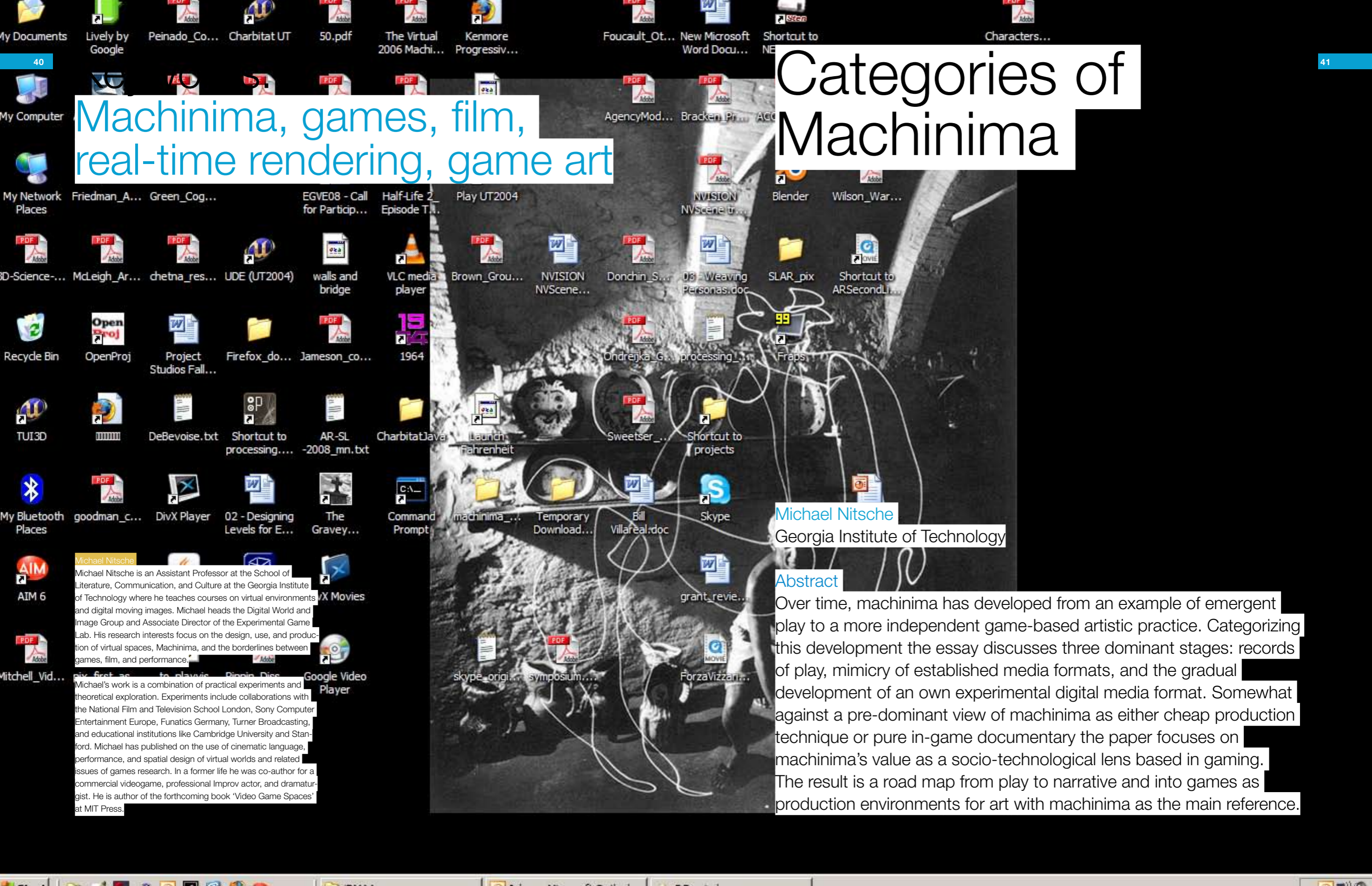
Söke, Dinkla. "The Art of Narrative—Towards the Floating Work of Art." In *New Screen Media: Cinema/Art/Narrative*, edited by Martin Rieser and Andrea Zapp, 27-41. London, England—Karlsruhe, Germany: British Film Institute—ZKM Center for Art and Media, London, England—Karlsruhe, Germany, 2002.

*Syriana*. Directed by Stephen Gaghan. 2005.

Ulmer, Gregory. "The Miranda Warnings: An Experiment in Hyper Rhetoric" In *Hypertext 2.0*, edited by George Landow, 344-377. Baltimore: Johns Hopkins University Press, 1997.

Veen, Jeffrey. *The Art and Science of Web Design*. Indianapolis: New Riders, 1997.

Wolf, Mark J. "Space in the Video Game." In *The Medium of the Video Game*, edited by Mark J. Wolf. Austin: University of Texas Press, 2001.



# Categories of Machinima

Machinima, games, film, real-time rendering, game art

**Michael Nitsche**  
Michael Nitsche is an Assistant Professor at the School of Literature, Communication, and Culture at the Georgia Institute of Technology where he teaches courses on virtual environments and digital moving images. Michael heads the Digital World and Image Group and Associate Director of the Experimental Game Lab. His research interests focus on the design, use, and production of virtual spaces, Machinima, and the borderlines between games, film, and performance.  
Michael's work is a combination of practical experiments and theoretical exploration. Experiments include collaborations with the National Film and Television School London, Sony Computer Entertainment Europe, Funatics Germany, Turner Broadcasting, and educational institutions like Cambridge University and Stanford. Michael has published on the use of cinematic language, performance, and spatial design of virtual worlds and related issues of games research. In a former life he was co-author for a commercial videogame, professional Improv actor, and dramaturgist. He is author of the forthcoming book 'Video Game Spaces' at MIT Press.

**Michael Nitsche**  
Georgia Institute of Technology

**Abstract**  
Over time, machinima has developed from an example of emergent play to a more independent game-based artistic practice. Categorizing this development the essay discusses three dominant stages: records of play, mimicry of established media formats, and the gradual development of an own experimental digital media format. Somewhat against a pre-dominant view of machinima as either cheap production technique or pure in-game documentary the paper focuses on machinima's value as a socio-technological lens based in gaming. The result is a road map from play to narrative and into games as production environments for art with machinima as the main reference.

Video games serve as reference point and expressive vehicle for a range of media such as films, books, television, comics, or the countless forms of fan art. In contrast to most of these formats, machinima is not only inspired by but intrinsically dependent on an underlying game engine. It embodies and re-interprets game technology and thus allows for a valuable perspective to games as such. Machinima embraces play, narrative, and art while still continuing to hold onto its close bonds to games as media, cultural artifacts, and technology. This essay will develop an argument line from the basic origins of machinima as pure recorded play, to a narrativization through cinematic interpretation, to a “third way” of machinima as a single standing art form that references and utilizes game technology on its own terms. This argument follows some historic order but the main categories are not exclusive of each other. Instead, they describe different aspects of machinima that do coexist in the current community of machinima producers.

Although machinima has found some critical and academic attention, it stubbornly refuses to be simplified and categorized. That is why this discussion also has to touch on a number of questions that clarify the role of machinima as game-based art form: Is there some quality that is at the core of machinima and can only be achieved in that format? Because machinima is a practiced art form, this has to be an ongoing discussion. The goal, thus, is to gradually build up a frame of qualities for machinima that help us to position it as art form. The key references in this essay will nest it in-between the more traditional film and television media and the world of video games. This art form represents narrative as well as associative poetic forms.

#### Play versus Narrative

In the first half of the 1990s, during the era of *Stunt Island*, *DOOM*, and *Quake*, machinima pieces were recordings of in-game performances of play. Players documented their play sessions in so-called “demos.” Demos are data logs that can be re-played in the very same game they were recorded in and provide a re-staging of the whole play event. They literally re-process an event from the past. Loading and “playing” a demo recording will reproduce the player’s activity as performed inside the game engine at the time of the recording. Due to their complete capture they are often used as play documentation and to detect cheat-

ers in tournaments. Superior players can use them as evidence of their capabilities and others can study tactics to learn and improve their own game. This form of machinima comes from the game and is made solely for the sake of gaming. If one can speak of any narrative or narrative setting, then it has to be that of the given game; if one reads them as art pieces, then they document the artistry of certain gamers.

Indeed, witnessing an outstanding player at work can be a thing of beauty with its own value. Play itself is a cultural activity and witnessing somebody playing *Halo* on an expert level can deliver a form of aesthetic pleasure not unlike the sensation we get from watching a basketball star performing a slam dunk or a clown doing a trapeze act. In this case, the virtual performance in the game is so extraordinarily good that it is worth to be preserved <sup>1</sup>. Players like Chris “NoSkill” Crosby displayed a mastery of *DOOM* that is so impressive that it was documented for other players. This might have been the original motivation for the birth of this kind of machinima: pure documentation of play. The method of documentation is of utmost importance at this stage. A demo recording is not framed as interpretative documentary but instead provides a full reproduction of the action itself. The camera work is limited, there is neither music nor voice over narration on the soundtrack, the action depicted is, in these early days, mainly the unaltered albeit perfectly executed player performance recreated by the game. Limited as these options might be, they include a game-based revolution in moving image recording. The demo format provides a new, factually neutral recording method of an event in a moving image world. It is a reproduction of the play itself and not of the single image taken from the play.

But even in the earliest days of real-time event recording and playback we can trace a longing of machinima toward more established visual storytelling. The ongoing debate between play and narrativization enters the picture. *Stunt Island* stands out as one of the earliest games that actively used the concept of real-time action replay and cinematic representation of it in its gameplay. It exemplifies the dream of machinima to be more cinematic and its intertextual undercurrents <sup>2</sup>. *Stunt Island* is based on the 3D engine of a flight simulator and provides a sandbox environment for

<sup>1</sup> Henry Lowood, “High-Performance Play: The Making of Machinima,” in *Videogames and Art*, eds. Grethe Mitchell and Andy Clarke. (Bristol, UK: Intellect Books, 2007), 59-80.

<sup>2</sup> Michael Nitsche, “Claiming Its Space: Machinima,” *dichtung-digital*, no. 37 (2007) <http://www.brown.edu/Research/dichtung-digital/2007/nitsche.htm>.

players to stage virtual stunts between a variety of vehicles. In the first stage of the game, players can stage spectacular virtual stunts. Then, the game allows multiple play-backs of this event during which players select different camera positions and editing points to optimize the event’s dramatic representation. The focus is more on the spectacular than on elaborate narrative, fulfilling an argument brought up against digital imagery before <sup>3</sup>. Nevertheless, the game design clearly embraces the camera as an interpreting and narrative device. The outcome is not a game-typical high score but a cinematic short: a stunt scene.

Technically, this trend toward the cinematic was accelerated when machinima developed from the demo recording to the second dominant production form: screen-capture of the game event. Screen-capture allows the recording of whatever happens on a player’s screen when playing the game. Because the machinima artist can treat the recording like a traditional video file, it is much simpler especially to post-produce than in a live demo. On the other hand, the result is limited by whatever single perspective is recorded. The specific qualities of a demo log file, its neutrality and event recording abilities are lost. Consequently, with the step from demo recording to screen-capture, machinima ultimately succumbs to a first degree of cinematic narrative: that of the camera and the single fixed shot it records. This certainly points into filmic traditions but it does not necessarily demand a classic narrative structure.

Chris Brandt’s martial arts ballet *Dance Voldo Dance* (2005) was performed in the fighting game *Soul Calibur*. It displays superb mastery of the controls as he utilizes the fighting moves as dance steps in a carefully planned and rehearsed pas des deux of two fighters dancers. Instead of engaging in the game-defined fight, the players of *Dance Voldo Dance* perform a ballet. *Soul Calibur* offers no camera control but instead always shows both combatants in a kind of optimized view, following them wherever they rotate or move. Brandt uses this functional in-game camera and combines it with shots from the game’s exhibition mode and intro cinematics in his final edit that is cut to the rhythm of a successful pop song. The result is a MTV-like music video machinima with little narrative but a spectacular re-framing of the game itself in a new context. This kind of visually attractive but non-narrative music video is part of a long tradition in machinima. Machinima music videos often display impressive editing skills and character control

<sup>3</sup> Andrew Darley, *Visual Digital Culture, Surface Play, and Spectacle in New Media Genres*. (London: New York: Routledge, 2000).

that arrange in-game performances to – at times highly elaborate – dance and song presentations. They exemplify the transition from pure game performances to a focus on their audio-visual re-interpretation as visual spectacle. Other pieces can shift the focus from the performance of the individual player to that of the game engine as such.

A machinima about the physics in *Halo*, like Glass’ *Wart-hog Jump* (2002), lacks any story whatsoever. Instead, it is a display of features of the physics engine in the game. This focus can be so pure and game-focused that it tells something about the way the game operates. The performance of the code becomes the topic of the machinima. Countless virtual Rube Goldberg machines have been implemented in various game engines to experiment and display the capabilities and flaws of the underlying physics engines. The results are often documented as machinima pieces that celebrate not any elaborate form of cinematic storytelling but the ingenuity of the physics engine in the underlying game. The camera is mainly functional in the display of the

While physics and character animation are still forms of adaptations of real world conditions into virtual environments, other machinima pieces focus on different – less realistic – aspects of their games’ technicalities.

event, no cuts are allowed or the continuity of the flawless execution of the Rube Goldberg machine would be questioned. In order to generate what Bazin termed the ‘density of something real’ <sup>4</sup> the shot has to remain continuous to document the genuity of the setup, the execution of the physical stunt, the marvel of the code at work.

While physics and character animation are still forms of adaptations of real world conditions into virtual environments, other machinima pieces focus on different – less

<sup>4</sup> Andre Bazin, *What Is Cinema?* trans. by Hugh Gray. (Berkeley: University of California Press, 1967), 84.

# Transformation of play into narrative is one defining element in the editor mode of the machinima-game

realistic – aspects of their games' technicalities. Many machinima pieces document glitches and bugs in existent game worlds that, like the Rube Goldberg machinima, mainly document game engine (mis)performances. Others concentrate on a game's technical bravura. BlackShark's *Project 1K II* (2006) is an audio-visual celebration of the underlying game, *Trackmania*, realized in a way that itself is deeply embedded in the game code. *Project 1K II* uses the "replay editor" of the racing game *Trackmania* as it assembles hundreds of replays (the title refers to the number as 1000, or 1K) of the same game level. The total assembly of all game sessions is then shown as combined playback performance. Instead of one single live performance, we see countless "recorded" performances meshed up into on single replay. Not the narrativization of an individual play is of importance but the visual effect of the merger of many sessions. The video does not document a single performance but performing in the game world as such.

We might call it the folk art of machinima – produced by the people, who play the games and see machinima as something that evolves out of their play and the game engine that implemented it. Yet, many successful machinima pieces evolved away from play and game as their core elements and instead moved toward another form: narrative film.

## Academy Awards for Machinima

From the neutral data logs, machinima artists readily advanced to narrative structures. In 1996 a group of *Quake* players, The Rangers, produced *Diary of a Camper*, by

many regarded as the first piece of modern machinima<sup>5</sup>. Even though the original *Diary of a Camper* is still a demo recording, it is, in fact, a document for narrativization. The Rangers used the game engine without any alternation and all action is defined in the given gameplay mechanics of the original game title. However, they played not to the ends of winning. Instead, they staged a pre-planned event inside the game world in a form of emergent play. Their narrative asked of one player to consciously step into a trap and get killed by the "antagonist" of the narrative. Such a suicidal behavior is decisively untypical for proper *Quake* players but typical for actors following a given script. Like actors, the performers in *Diary of a Camper* (and the countless machinima pieces that followed) are performers of a self-defined drama not of a pre-designed game situation. Their mastery of the game is displayed in the flawless way it translates a game performance toward a non-game-specific story. It is not visual spectacle as such, as seen in *Dance Voldo*, *Dance* but part of the greater goal of storytelling as players thrive to present this story through their virtual performance in-game.

Machinima produced by game companies also leaned toward the narrative. For example, in *Ms Pac Man* game producers used in-game cutscenes as rewarding narrative fillers for their games. Short film clips like these explain and contextualize the surrounding gameplay<sup>6</sup>. They are often applied like narrative glue between otherwise purely

5 Paul Marino, *3d Game-Based Filmmaking: The Art of Machinima*. (Scottsdale, AZ: Paraglyph Press, 2004).

6 Rune Klevjer, "In Defense of Cutscenes," in *Computer Games and Digital Cultures 2002 Conference Proceedings*, ed. Frans Mäyrä. (Tampere: Tampere University Press, 2002), 191-202.

ludic game experiences. Apart from written back stories, machinima and Full Motion Video segments are the most prominent examples for this kind of cinematic "story infusion" today. Debates that draw lines between the ludic and the narrative often used them as one clear demarcation lines between the two<sup>7 8</sup>. The cinematic fillers in question are not always machinima but improvements on the side of the game engines have led to a notable increase of real-time rendered machinima cutscenes. They start to blur this once so clear demarcation line. Landmark titles like Yu Suzuki's *Shenmue* made machinima sequences a substantial part of the ludic experience. So-called Quick Timer Events promoted in *Shenmue* carry references to the older concept of interactive film including branching options and decision points with unknown consequences. Despite these anachronistic features, Quick Timer Events developed into a wide-spread technique in many games with a narrative subtext from *God of War* to *Resident Evil 4* and has evolved into a mix between play and cinematic story beats. The combination between the two seemingly opposing modes has become smoother and the transitions blur thanks to machinima techniques.

In the form of real-time cutscenes and Quick Time Events the film scene moved closer to the game; at the same time, screen-capture recording shifted the play recording closer to a linear film sequence. The image by image recording of screen captures and resulting re-interpretation of the play session can become the basis for an – at times highly elaborate – narrative about this session. Generating such a perspective forces the machinima artist to select and arrange the events and thus it often implies a narrative stance.

While the Quick Timer Event puts the "play" back into the filmic scene, play becomes re-framed as story event in screen-recorded machinima. This becomes obvious, for example, in the mixed media productions of commercial gamecasts and game tournament presentations. Technically, gamecasts are a form of live game performances that often combine machinima with video footage of real world action. They are clearly game specific but also mimic traditional TV formats. A gamecast of a typical tournament usually features at least one commentator and over the course of the action it builds up heroes, underdogs, and losers. It presents the action from dramatic angles that ultimately position audiences not as neutral observers but as involved witnesses in the event as an unfolding narrative between

7 Rune Klevjer.

8 Clive Thompson, "Oughtta Stay Out of Pictures," *Slate* (January 27, 2005). <http://www.slate.com/Default.aspx?id=2112744>. (March 30, 2008).

established characters. The various developments outlined above leave us in a state of merger between cinematic/ TV narration and play. What started as in-game condition to document play and avoid possible cheating turns into a TV-show that focuses on narrative and dramatic development.

Transformation of play into narrative is one defining element in the editor mode of the machinima-game *The Movies*. While the original gameplay is an abstracted real-time simulation of a gradually developing Hollywood studio, the editor mode features staging, editing, post production tools, and other options to optimize scenes that can be recorded in the virtual game world. The results depend on the workings of this post-production editor and the player's mastery of it. It relies much less on the player's performance of the enacted event itself, which usually consists of pre-defined motion-captured sequences. While this does not automatically imply that all machinima made in *The Movies* is narrative, it nevertheless indicates a strong bias of the engine design to traditional film-making and channels results more often than not into the dominant format of commercial production, namely narrative film. The game world becomes a stage not for ludic play but expression of storylines, character development, and dramatic structure. It heavily restricts direct access to the performance itself but instead concentrates on the use of the film tool, the editor and the scene pre- and post-production.

One reason for this development might be the imminent success of narrative machinima pieces. While gameplay recordings might be relevant to the community of the specific game, narrative machinima can engage audiences even if they are unfamiliar with the underlying game itself. This kind of machinima transcends the game community as it reaches out to the mainstream audiences used to narrative computer animations. Players still generate a lot of in-game recordings of pure play. Games like *Halo 3* provide new tools for these kind of gameplay movies. However, the audiences for this kind of movies are often fragmented and the use of narrative often helps to popularize a machinima as seen for example in the successful *Red vs. Blue* series. Most prominent machinima that step beyond a single given platform are presented as narratives that have some value in their story-driven content even outside the game. They evolve around carefully constructed stories told in the game engine. What engine is used can become secondary and is decided on accessibility and technical quality. KBS Production's *Bill et John II: Danger Attacks at Dawn* (2006) might use a flight simulator almost devoid of any human actors but manages to match superb voice over narration and shot assembly to tell an award winning story. First person

shooter games were used for *Anachronox: The Movie* (2002), which uses a heavily modified *Quake II* engine; *Red vs Blue: The Blood Gulch Chronicles* (2003-2007), which uses the *Halo* engine; and *The Journey* (2004), which uses the *Unreal* engine. All of these pieces tell fundamentally different stories in very different ways. The game engine of *World of Warcraft* has supported the creation of countless machinima that cover numerous genre, from the epic *Edge of Remorse* (2006) to the musical comedy of *The Ballad of the N00b* (2006). It is still possible to notice differences between different production approaches but borderlines often blur and original gameplay might be entirely hidden from sight to make space for other elements of the narrative. The story told and the setting of the game detach.

Machinima tools, like Shortfuze's *Moviestorm*, provide for animation techniques that do not use game settings at all but instead resemble virtual studios for staging of any given script. As a result, machinima films often only utilize the game as a staging arena and try to shine in the traditional domains of cinema such as writing, design, directing, cinematography, sound, editing, and post-production. In this case, machinima mimics traditional film productions and competes with their standards – thus it puts itself under the same critical lens. The organization dedicated to the development and promotion of machinima, the Academy of Machinima Arts and Sciences (AMAS), plays with that reference and copies a lot of the award categories for their annual Machinima film festival. The outcome, then, is a traditional film as the head of the AMAS, Paul Marino, suggests: “By combining the techniques of filmmaking, animation production and the technology of real-time 3D game engines, Machinima makes for a very cost- and time-efficient way to produce films, with a large amount of creative control.” (machinima.org) This view praises machinima for its differences from traditional CGI production by being cheaper, faster, more accessible. Machinima is seen as a new production technique that delivers results which should be compared to traditional and mostly narrative movies<sup>9</sup>. There are remarkable examples of machinima in this tradition that address this challenge. Outstanding machinima pieces like Jacqueline Turnure's and Peter Rasmussen's feature-length detective film noir *Stolen Life* raise the bar in areas such as writing, cinematography, and directing. Martin Falch's *Tales of the Past* trilogy (2005-2007) – shot in *World of Warcraft* – not only roughly doubles in length between episodes but also displays the

<sup>9</sup> Hugh Hancock and Johnnie Ingram, *Machinima for Dummies*. (Hoboken, NJ: Wiley Publishing Inc., 2007).

gradual improvement of the production's visual, audio, and post production techniques to impressive standards. However, a complete inclusion of machinima into traditional film business and practice is problematic. If one concentrates on these established categories alone, the result would be a good traditional film in the best possible case. In the end, no new elements except the new production cycle are offered. The fact that the film is made using machinima techniques based on video games becomes a mere technological side remark.

Such a neglect of the game's functionality in the strife for narrative Hollywood formats jeopardizes the specifics of machinima as an own format. As much as traditional quality criteria are necessary to improve the pieces, they also can lead away from the origin of the form that is so much part of the surprising artistic niches that reside in machinima. A third way is needed to capture this creative tension between pure game-related production and sheer copying of commercial cinematic practices. This approach is based on a blending of the two main reference points, film and game. It is in this hybrid form that machinima emancipates itself from the game without directly merging with the cinematic. It is here that a machinima specific media practice might evolve.

#### Experimental Reflections

All machinima is experimental to some extent due to the innovative approach to the generation of the moving image. Here, the term “experimental” is used when pieces do not simply use game rendering and animation techniques to create traditional film pieces but instead actively apply machinima to investigate the connection between the two poles of game and film. New possibilities open up where the game element meets the cinematic and manages to avoid classification as either exclusively ludic or Hollywood narrative. The question for this third way should be how machinima pieces include the game-ness and push it in terms of narrative content and cinematic expression. A number of examples will be discussed to explore this third way.

Games can be more than a production vehicle to machinima, even more than a platform for play/ performance. They can be a cultural reference point that co-defines the context of the machinima piece in ways that remain inaccessible to either film or game individually. When the modified G-man, a key character in the *Half-Life* game world, speaks to the audience using the voice of George W. Bush

in Mike Munson's *The Tyrant* (2006), then the film can create new references between the 43rd US president and the amoral mastermind of the *Half-Life* universe. Referencing the background of the game adds to the critical message of the machinima as the virtual game world adds its own story and context. This demonstrates that a new layer, a new critical perspective becomes available when one uses such a game universe effectively through machinima. Munson continues this use of game references on the level of the film's soundtrack. *The Tyrant* uses music taken from a video game in the survival horror tradition (*Silent Hill*) to include another game-based cultural reference, adding to his apocalyptic vision. The film delivers its statement about a real world personality through multiple game cross-references. Thanks to these references, *The Tyrant* surpasses mesh-up montages of newscasts and speeches. The selection and presentation of in-game material delivers an additional expression to the piece, one that originates in machinima's game-based format.

Eddo Stern's *Sheik Attack* (1999-2000) takes the idea of ideology expressed through the use of certain games further. Like *The Tyrant*, *Sheik Attack* is a piece of screen-captured machinima post-produced with added music, subtitles, and carefully timed editing. It re-interprets the historical events of strikes of Israeli special forces against terror-suspect Sheiks in Lebanon. Different aspects of the attacks are presented through the use of different games at different stages of the film. Games seem to be selected based on what the depicted action demands but they also represent certain ways *how* the game's functionality incorporates the depicted action. Any action presented in the machinima is also a ideologically framed action in a

inherits certain ideologies and contexts given by the games themselves. For example, *Rainbow Six* is a game that glorifies international special forces as the original game assembles heroes from all over the (virtual) world in one elite fighting team. Using the game in the chosen context extends the critique and questions the legitimacy of pre-emptive covert operations not only for Israeli forces but any military unit. The game as cultural artifact, its content, design, and its context become part of the machinima's expression just like the underlying game technology.

References to the video game as technology can be even more specific and rooted deeper in the functionality of the game engine. The first episode of Kirschner's *Person2184* series, *The Photographer* (2006), uses the First Person Shooter *Unreal Tournament 2004* almost exclusively as a neutral render engine. Kirschner modified the engine and its gameplay to such an extent that the game mechanics are completely hidden. He furthermore changes the art work completely and replaces it with his own so that it is nearly impossible to identify the game engine from simply watching the piece. However, in the style of the earliest machinima producers, Kirschner delivers the machinima as a uMod file that executes in the game engine live at runtime. *The Photographer* might not look like the *Unreal Tournament* game it is utilizing but it certainly depends and illustrates the operational qualities of a real-time game engine of demo playback. This opens up interesting possibilities for the real-time rendered machinima image. In one sequence of *The Photographer* a fragmented cityscape is seen inhabited by video-like cut-outs representing inhabitants of this space. The shot is then combined with a view of floating blood cells as they seemingly stream through

References to the video game as technology can be even more specific and rooted deeper in the functionality of the game engine.

game that represents a certain philosophy in its underlying design. The initial building of settlements is presented through the real-time-strategy (RTS) game *The Settlers III*, which allows relatively low levels of enemy engagement compared to other more war-oriented RTS titles. The assassination itself is presented using the *Rainbox Six* game, which solely concentrates on stealth attacks, gun fights, and enemy annihilation. The selection of these games provide a certain aesthetic but the machinima also

a body. The cross-reference is not only a visual but also a technical one as the movement of the characters in the street uses the same algorithm that drives the movement of those blood cells. Both are generated in real-time and this associations, thus, is not only visual but also conditional/mathematical. Parallels between the body and the city are generated through the functionality of the modified game engine. Because of the live-ness of the demo, this connection is actually performed in real-time by the computer

and plays out differently at every iteration. The audience looks at a logical connection between different images and performances that is based on encoded behavior and that allows for parallels between these behaviors. The code-based performance of the modified underlying game engine supports the suggested visual and contextual reference and generates new expressive connections.

Brody Condon's work often either plays with game references or lives inside a game world using and enhancing its technicalities as expressive means. His *Karma Physics < Elvis* (2004), for example, uses the physics engine implemented in *Unreal* to bring a flock of floating Elvis figures to a spastic-reactive life. He describes his overall working approach in a 2005 interview with EDGE: 'I don't usually make new things, but operate on the level of creative consumption. Think about it: game mods, Legos, sampling and mixing, etc. We don't really create anything anymore, we just consume creatively. It's a perfect example of how our culture has changed in the era of late capitalism.' (Rossignol 2005) The same qualities are often used to describe machinima pieces as forms of game-based remixing and found art that re-use game assets and code (Lowood 2005). Condon's "self-playing computer games" *Resurrection* (2007) or *defaultproperties* (2006) are typical borderline case where art installation and machinima/ game art overlap. Condon reproduces historic paintings in a real-time rendered world and adds short animation sequences to them. Machinima techniques help to bring the painting to a digital game-based life. Like his *Karma Physics < Elvis* piece, each single piece of these self-running game animations runs on a customized computer. The pieces cannot be reproduced properly on TV or in a cinema but are hard-wired machinima that need to be performed live by specialized machines. The resulting machinima comments not only on the historic paintings but also on art practices and (re)production. They re-frame the existing art practices (and their results) in the digital culture of sampling and mixing of the live performed moving image. This reframing only works through machinima-like technology.

The final example reaches even deeper into the game technology, namely into graphic card and render algorithms. Julian Oliver created a kind of live drawing program based on the *Quake III: Arena* engine. His *ioq3aPaint* (2007) works by breaking the established way that 3D render engines generate their imagery, more precisely: by using a re-draw glitch in the game engines in *Quake III*. 3D engines try to re-write the screen image as often as possible per second, replacing the last frame with the new one to generate the illusion of a moving image. *ioq3aPaint* experi-

ments with this process. It does not properly "clean up" the screen between frames but instead overwrites it, allowing all moving objects to drag their textures across the screen in their movements. The result is a smudging blur of moving colors and textures that are generated as virtual characters move through abstracted game worlds. The characters themselves are operating like AI-driven paintbrushes at work inside the 3D game level. Their movements result in a growing painting on the 2D canvas of the screen. The images are truly "moving" and constantly morphing into new shapes due to the underlying game engine. The piece is an example for a game-based non-narrative machinima recording that uses the very logic of the render engine and the AI behavior of the characters in it. It poses this question through the game, its bot behavior, its texturing, and rendering. Viewers gain a new window with surprising perspectives into the generative art that operates at the heart of these machinima examples.

#### Moving Targets

The third way of machinima as experimental reflection, as was outlined in the examples above, comes to life only in the combination of the established visual traditions with the specific conditions of the game. It asks the artist to open up a technological and contextual gap that can become part of the piece itself. This offers a crucial backbone for machinima as art form. In one way or the other any new media form should be able to ask new questions or pose old questions in a new way. The examples of machinima as experimental reflection provide this as they open up new artistic territory. They let the game affect the machinima piece in terms of content as well as technical performance and demonstrate a way to provide a machinima-specific critical frame. Because this frame is not anymore fully contained inside the game or the cinematic, this "category" of self-aware and self-reflective machinima stands out as relevant artistic realization. It also indicates a gradual maturing process of machinima.

It is important to realize that the here outlined three strands are not exclusive of each other. One can find all three outlined categories – recorded play, narrative film, and experimental reflection – at work in the machinima community today. They often overlap and inform each other and at times a single piece can include them all at different stages. Machinima is still a moving target that keeps on re-inventing itself, often in parallel to improvements of game engines. As such, the suggested experimental hybrid of game and traditional film is likewise constantly adjusting to

the new possibilities and remains in fluxus. It is not an end to the means of machinima but a realization of its power; more a question than an answer. No other format can provide for this kind of moving images and if a new expressive technique allows us to generate new references, then this ability should inform our criticism, analysis, and research of this technique. This does not exclude ludic or narrative elements but it shifts more emphasis on that experimental exploration of the area in-between these trodded paths and in-between different technologies.

Machinima can (and is understood to be) a lot of different things but there are some precious few things that only machinima can be and for which it provides the only available platform. The here mentioned hybrid examples are among them: unique, surprising, and machinima at heart that unlock new critical perspectives.

#### References

- Bazin, Andre. *What Is Cinema?* trans. by Hugh Gray. Berkeley: University of California Press, 1967.
- Darley, Andrew. *Visual Digital Culture, Surface Play, and Spectacle in New Media Genres*. New York: Routledge, 2000.
- Hancock, Hugh, and Johnnie Ingram. *Machinima for Dummies*. Hoboken, NJ: Wiley Publishing Inc., 2007.
- Kelland, Matt, Dave Morris, and Dave Llyod. *Machinima*. Boston, MA: Thomson, 2005.
- Klevjer, Rune. "In Defense of Cutscenes," in *Computer Games and Digital Cultures 2002 Conference Proceedings*. Ed. Frans Mäyrä. Tampere: Tampere University Press, 2002. 191-202.
- Lowood, Henry. "High-Performance Play: The Making of Machinima," in *Videogames and Art*. Ed. Grethe Mitchell and Andy Clarke. Bristol, UK: Intellect Books, 2007. 59-80.
- . "Real-Time Performance: Machinima and Game Studies," *The Journal of the International Digital Media & Arts Association*, no. 1 (2005): 10-18.
- Marino, Paul. *3d Game-Based Filmmaking: The Art of Machinima*. Scottsdale, AZ: Paraglyph Press, 2004.
- Nitsche, Michael. "Claiming Its Space: Machinima." *dichtung-digital*, no. 37 (2007). <http://www.brown.edu/Research/dichtung-digital/2007/nitsche.htm>.
- . "Film Live: An Excursion into Machinima," in *Developing Interactive Content: Sagas Sagasnet Reader*. Ed. Brunhild Bushoff. Munich: High Text, 2005. 210-43.
- Rossignol, Jim. "Art and Games," *EDGE Magazine*, 2005. 143.
- Thompson, Clive. "Oughtta Stay Out of Pictures." *Slate* (January 27, 2005) <<http://www.slate.com/Default.aspx?id=2112744>> (accessed March 30, 2008).



<http://idmaa.org/>

# the International and Arts Assoc

