

Claiming Its Space: Machinima

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Abstract

Although machinima has grown exponentially, it remains a largely undefined digital artistic practice in-between existing traditions. Machinima makers freely sample/combine/ and break elements of traditional media. They "play" their references. This essay does not attempt to fix machinima to any single definition but will identify the intermedia relations to better position machinima into the digital media landscape. The argument will target three main influences: film, television, and theatrical performance. To exemplify these points the essay will discuss exemplary and relevant machinima pieces. It puts emphasis on the real-time aspects in production and play back to highlight the key specifics of this relatively new format.

1. Introduction

Machinima is a video production technique that uses real-time graphic engines, such as video games, to generate moving images. Since its official introduction in 2001 it has made its way into film festivals, art exhibitions, commercial film, television, and theater productions. Still, it remains a largely undefined phenomenon in-between existing media. The cross-media references are legion and rarely critical or even consciously applied. Machinima makers freely sample, combine, and break elements of traditional media. They "play" their references.

This essay does not attempt to fixate machinima to any single definition but to show some of the transmedial and intertextual references that are at work. In the machinima community this intertextuality is debated as part of the discussion about "inside-out" versus "outside-in" approaches. "Inside-out" refers to game players using machinima as expression and recording of their play. "Outside-in" stands for the use of game engines as tools for traditional animation and storytelling independently from games. "Outside-in" productions such as *Anna* (Kang 2004) are not recognizable as game-based media but are stand-alone animation pieces. "Inside-out" productions like *Red vs Blue* (Roosterteeth 2004-2007) incorporate the elements of the game engine in their content. To this day, the debate

remains open and circles around the role of game, play, and presentation in machinima. This essay will target two main influences: the moving image (film and television) and theatrical performance. Basis for both is the dominant source of machinima: the video game.

2. Video Game

Machinima has been defined as 'cinema made from computer-game visual renderers' (Hanson 2004:60) or as film-making using real-time virtual 3D environments (Kelland et al. 2005) and 'Filmmaking + Animation + Game Tech' (Marino 2004:3). There is still a lot of leeway in these attempts to define the new format and the community is struggling with a clear definition as it continues to evolve. The definition of machinima that informs this essay most is Katie Salen's (2002) concept of machinima as a form of emergent play: 'part theatre, part film, part videogame' (99). Salen lays out the main cornerstones of the intermediality of the format: born from video games, machinima applies theatrical techniques to generate the event, which is presented often in a cinematic way. According to her, machinima finds itself operating in a media triangle. How machinima connects the various references has changed over the format's history. These changes themselves illustrate the constant media-border-crossing that is at the heart of machinima.

Machinima pioneers often refer to the hacker- and demoscene, whose programmers take pride in creating highly elaborate graphical extravaganzas, often with the most efficient and lean code (Tasajärvi 2004). They strive for the best possible visual graphics rendered in real-time by the smallest code base. To keep the file size small, most elements are created procedurally. That means that visuals are created, animated, and rendered during runtime. The same task applies to video game engines. 3D game engines such as *Doom* (Romero et al. 1993), *Stunt Island* (Stephens 1992) or *Quake* (Carmack and Abrash 1996) rely from their outset on a real-time animation of virtual spaces and characters. For interested artists, modifying these games is far easier than coding a classic demo from the ground up. No wonder that players turned into producers and started to use game technology for their art. Instead of coding the rendering algorithms themselves (like the demo programmers did), players started to use and modify the available game engines.

Especially *Quake* became a wide-spread machinima production platform because it optimized the recording of events in the game engine in data logs. These data logs – so-called "demos" – can be played back in the game engine to re-live the events in the game world. Originally, players used demos to record their virtual matches

and distribute these recordings as data files. Often the recorded events themselves were simple bragging movies or examples of playing strategies and remained in the gaming domain. *Quake* became so dominant as a production tool that the term "Quake movie" became a predecessor for "machinima". But as artists experimented with other game engines, the reference to a single game engine became obsolete and the more generic term "machinima" was coined by Anthony Bailey and Hugh Hancock in 1998/1999 as a combination of "machine" and "cinema" (*Word Spy* 1995-2007).

In its early days the format lived almost entirely in the game engine itself. Machinima pieces were available exclusively as demo files that could be played back only in the very same game engines they were produced in and only if certain hard- and software configurations were met. The machinima community, thus, was limited to experienced video game players who could master their game engine. But even in the early days of machinima – 1990-1996 – video game engines already played with their proximity to film production and the artistic presentation of the moving image. A game such as *Stunt Island* referenced the world of film production already in its very design: *Stunt Island* provides the player with a playground (a virtual island) where stunts and collisions can be staged between various game objects. These stunts can be played back and suitable camera angles can be arranged to show the stunt in the most effective way. Players do not gain a high score but a spectacle.

From its outset machinima affiliated itself with this kind of game technology and cinematic expression which are bound to produce problematic media combinations. Yet, it is precisely because of these friction zones between the media at work that machinima remains so interesting. During that early period, the growth of the format was driven mainly by a community of players. Hackers, modders (who modify existing game engines for customized use), and game artists created their machinima pieces in tuned game engines, often tweaking them further to achieve specific effects. Machinima evolved not as a clearly industry-defined media format but from the practices of an underground art production that playfully embraced any media format that offered itself for their artistic practice. It was created by expert players and experienced by a limited, yet growing group of aficionados, all united by the game needed to produce and play back the "demo".

When game developers changed the underlying demo format, this production technique became more difficult for machinima producers. The era of the "demo" started its steady decline at the turn of the century. Instead, machinima makers started to capture the moving image directly from the screen. The presentation itself moved into the foreground. Players transformed the toy-like game engines into expressive production environments which ultimately can generate and contain (cinematic) art. At that point, machinima exemplifies Levinson's steps of media development from toy to mirror to art (Levinson 1985). But this orientation of machinima towards the film format came with a price: The game engine lost its

value as replay engine and remained only a production tool. Game engines only rendered the images during production; from then on these images were recorded directly onto tape or digitally captured from the screen. The final outcome is a normal video file that does not depend on the game anymore but can be viewed in any media player.

The disappearance of the game engine as playback device literally cut the technological specifics of machinima in half. At the same time, it opened up machinima to the masses. Because machinima became available in standardized video formats everybody could download and watch it. Machinima spread beyond the hard-core gaming community and emerged as a wide-spread form of cultural expression using video games. Today, machinima is an accepted platform for artistic expression that uses video games and offers an own aesthetic and culture.

It was only a matter of time until the game industry adapted the approach and simplified machinima production. Games like *The Movies* (Molyneux 2005) or *The Sims 2* (Bradshaw 2004) include necessary machinima features out of the box as well as editors for content customization. While the older engines demand a lot of technical expertise and player-generated tools, these modern ones are more accessible. However, they still pose limitations. For example, neither of these two engines supports demo-recording.

Machinima became more popular among viewers and more accessible for producers but it also lost some of its original powers. Today the demo-recording scene has almost faded in the shadow of the screen-capture technique. This is a paradigm shift from the recording of the event (in a demo) to the recording of a viewpoint to the event (in a screen capture) – from a new game-based logging format to the established production of moving images as successive still renderings. In the wake of this ongoing shift towards traditional film production more and more film techniques find their way into machinima: sound post- or pre-production, editing of pre-recorded moving images, post-produced special effects such as compositing or color correction, and other techniques are now commonplace in many machinima productions. This illustrates the gradual move of machinima from game media to television and film media – it also describes a gradual decline of its original traits.

In screen-capture machinima Salen's triangle of theater, film, and game is skewed towards the film aspect with a decline of the game and – as will be discussed – the live performance part. The following argument will be that theatrical and performance qualities of machinima are implied in the game-ness of the form while the visual traditions of the moving image are more indicators for what most machinima aspires to be and how it is usually read by its audience.

3. Theater

Virtual environments have been discussed as theatrical stages since the mid-eighties starting with Brenda Laurel's unpublished Ph.D. thesis (Laurel 1986) as a first point of reference. Laurel calls for a dramatized virtual environment and suggests Aristotelian structure as a useful concept to drive the generation of the events in the virtual world. She suggests a story-generating Artificial Intelligence system with three main tasks: 'create a world, make that world interactive, and make the user's experience of that world dramatic' (Laurel 1986:21). This idea of a dramatized event structure seems to be generally accepted but her reference to Aristotle does not go undisputed.

Exactly which theatrical model should be applied has been the point of many debates. Suggestions range from Aristotelian (Laurel 1993), to non-immersive (Frasca 2001), neo-Aristotelian (Mateas 2002), and spatial (Jenkins 2004). However, even the most prominent critics of Laurel's theory accept that there is a 'performative aspect' (Aarseth 1997:21) to playing a game. At the same time, performance studies started to address the notion of a virtual performer (e.g. Burrill 2005) and practical experiments were conducted in the area of virtual theater. Digital worlds have been home to forms of improvisation (Perlin and Goldberg 1996, Hayes-Roth et al. 1994), virtual television shows (Benford et al. 2002), or various mixed-media performances (for an overview see e.g. Dixon 2007) as well as many other forms of virtual performances. Specifically for machinima, the theater aspect grows from the way events are generated in the game engine on the one hand and the way events are played back in the demo file on the other. The following paragraphs will look at these aspects that are typical for machinima and that reference theatrical qualities.

3.1. Players are performers

There are significant differences between playing a game and performing for a machinima piece. Games are often defined using a 'quantifiable outcome' (Juul 2005, Salen and Zimmerman 2003) whereby the outcome is provided by the world of the game. Action is often driven by a set goal that should be achieved within the borderlines of the game.

To reach this goal the player has to perform certain actions based on specific rules. Because machinima often uses the limited range of (inter)actions available in a video game, it is also often limited to the game's available action repertoire. But the aforementioned shift from 'playing the game' to 'playing a machinima performance' exemplifies how this limited range can be re-applied in new ways. The play is not aimed at a closed circle in the specific game setting but at future viewers. Machinima actors do not improve their high score but play the game as a

performance for an audience (see also Lowood 2005) who is the final addressee. With that in mind, machinima actors apply the available repertoire in ingenious new ways.

What might be a failure in the sense of the game can be a successful dramatic expression for the machinima piece; what might be a cheat or bug that threatens the game's consistency or technical stability can be the very topic of a piece. Game-ness can often become a focus of machinima in the form of critical commenting (see e.g. *Bot* [Palmer 2004]) or self-reflection (see e.g. '*Red vs Blue*' [*Rooster Teeth* 2003-2007]). Machinima does not simply draw technological assistance from games but its content often expresses game topics, design, experience, and technology.

The machinima talk show *This Spartan Life*, hosted and produced by Chris Burke (2005) and available as free downloads on the web, lives in this in-between area between playing the game and performing a show. Chris Burke, a.k.a. "Damian Lacedaemon", invites guests to join him online in the world of the popular shooting game *Halo*. Inside these open game environments he conducts interviews as a visual chat between two avatars strolling through the game space. But while he, his guest, and his virtual camera operators, who record the event, use the game space as a virtual show stage, others continue to log on to the same world to play the game proper. The surrounding game world still operates as a functional game space, where virtual heroes kill each other. And because they are unaware of the ongoing interview situation, these players might attack the show's host or even the guest. The game is interwoven with the concept and the setting of the show. Occasionally, even Burke and his guests fall back into the expected game behavior: at one moment they might be talking about digital activism and art production – the next they are shooting at each other's avatars. The borderline between "doing an interview" and "playing the game" is extremely thin and *This Spartan Life* gains a lot of its innovative momentum from playing along this media borderline.

More in the tradition of established TV talk shows, the *ILL Clan's* work (*On the Campaign Trail with Larry & Lenny Lumberjack* [ILL Clan, 2003] and *Tra5hTa1k with ILLWill* [ILL Clan, 2005-]) is a good example of improvisation in a specially prepared game world. *Tra5hTa1k with ILLWill* is a live talk show staged in a virtual TV studio custom-made for this purpose. What it lacks in unpredictable game features compared to *This Spartan Life* it balances with the improvisation acting skills of its performers, who perform their pieces as theater shows with participating live audiences and on real theater stages. This form of machinima blends the real with the physical performance: virtual and physical stages interconnect.

3.2. Processing live – performing live

Live performance and game can also connect on the replay stage in the form of the “demo”. The discussion of “live-ness” has stretched the term into other media before. Auslander (2000), for example, argues that television replaces live performance as it aims to ‘recreate the theatrical experience for the home viewer through televisual discourse’ (Auslander 2000:30). But re-processing a demo recording in the game engine pushes this live-ness and the discourse even further. The player-audience encounters the event rendered in real-time as an ever-new performance happening on their individual machine in front of them.

As previously outlined, a demo data log preserves the events of the in-game performance and can re-create these actions later in the same game engine. The replay of a demo-recording effectively renders the events live again in the game system. The action as well as the event space are generated again in real time but in absence of the original human performers. That is why every demo-playback is a unique real-time event creation. Playbacks can differ from each other depending on the machine’s hardware and software. For example, the resolution of the piece depends on the settings of the game engine, the frame rate on the power of the graphic card, and the collision control on the processor. In other words: one can download the demo file of the seminal *Quake* machinima piece *Diary of a Camper* (van Sickler 1996), run it inside the *Quake* engine, and receive a new – and in some ways a first – staging of the event as it was originally created by the Rangers Clan in 1996.

Because the event is re-created again certain interactive options open up. The demo recreates the event situation and usually locks the action itself but the visualizing camera can remain flexible and the “viewer” as well as the local game engine can take control of the camera and shape the visualization at will. Not unlike large-scale happenings that allow audiences to enter the performance space and engage in the event, demos can offer viewers a level of interactivity through visual exploration.

Virtual performance and demo-recording position machinima in a dual proximity to theater. Intermediality, here, is at work in production as well as replay and heavily infused with game-specific traits that add a unique edge.

4. Film

Machinima can be understood in reference to existing film genres but it can mix these references with a new game-related perspective. This game-reference can vary depending on the kind of game engines used to create the machinima. To avoid confusion all examples used here will focus on machinima made in the same game,

namely *World of Warcraft* (Blizzard Entertainment 2004). This narrows down the game-related range and allows for a valid comparison between different machinima. *World of Warcraft* is a Massively Multiplayer Online gaming phenomenon that was launched in 2004 and provides its millions of players access to a pre-constructed, consistent virtual world, where they can go on virtual quests, socialize, explore, and interact with other players and the “world”. Although the setting is clearly “otherworldly” and inspired by fantasy and folklore literature, when these interactions are recorded in the form of machinima we can trace various film conventions in the machinima result.

4.1. Stepping into genre

One day in the game space of *World of Warcraft*, Daddar, a skilled player, sets out to kill the virtual guards of the Ironforge Bank, a prominent location in the game world. His raid could be interpreted as a typical in-game action as it follows basic interaction principles of *World of Warcraft* and does not alter the location or the actor. But Daddar records his actions, edits highlights together, and releases them as the machinima *A Day at the Ironforge Bank* a.k.a. *Ironforge Bankers* (2005). This recording will serve as a first guide to trace film genres in machinima.

The piece is placed in the earlier tradition of the machinima bragging movie and the whole event is aimed at a future audience. Daddar wants to gain the recognition of his community (it was a male avatar). The machinima piece is the goal of his actions, not a successful bank heist. Like early theater recordings the camerawork is very limited and confined to the immensely restricted in-game camera controls of *World of Warcraft*. In addition, the only post-production in *A Day at the Ironforge Bank* is in the editing and the addition of an underlying, largely unrelated music soundtrack. Still, Daddar’s actions and his machinima fit a certain cinematic representation form.

The tale of a lonely outlaw successfully fighting the odds has its own tradition in outlaw Western movies. A bank robbery, a stealth attack, a desperate stand-off against numerically superior forces, a defeat, a stubborn death-defying return, and a fierce and bloody battle leading to an escape on horseback into the great wide open – all the elements that define *A Day at the Ironforge Bank* – can also be found in classic outlaw films. And like the outlaw (anti)heroes of the new Hollywood of the nineteen-sixties to seventies that grew from a counterculture opposing the established system (King 2000), Daddar’s fame is based on an attack on the establishment: a bank controlled by the game system and its game company. It is situated in a virtual location that is by definition hostile to his kind, guarded by computer-controlled characters that cannot really be defeated. His actions might be useless in a gaming sense but match the established genre-standards.

Even before the rise of the sixties counterculture Warshow argued that ‘the gangster is the “no” to that great American “yes”’, a figure who ‘has put himself in a position where everybody wants to kill him and eventually somebody will’ (Warshow 2001:106). Daddar’s game character is part of the rogue class and furthermore a member of the “undead” race. His character appearance and background is as much a gangster as one can be in the game of *World of Warcraft*. Like Warshow implies, this gangster figure has to be tragic. Ultimately, Daddar’s efforts are futile: the virtual bank cannot be defeated. The Rogue cannot destroy the very game system that generated him in the first place and no matter how many guards and accountants this anti-hero might fight, due to the set-up of the game the bank treasures remain beyond his reach and the killed accountants will respawn automatically. The bank always wins.

Even the final exclamation mark of the tragic anti-hero accepting a dramatic death in the face of the impossible odds is not available. The game prevents characters from dying permanently and provides a form of instant re-birth in the case of a virtual death. Unlike the heroes in Arthur Penn’s *Bonnie and Clyde* (USA 1967), George Roy Hill’s *Butch Cassidy and the Sundance Kid* (USA 1969) or Sam Peckinpah’s *The Wild Bunch* (USA 1969), Daddar cannot go down in a glorious last stand because even the gangsters are protected from death in *World of Warcraft*. The system always wins but the player can never really lose either because he is automatically re-born and his character’s death is soon forgotten. This creates a new form of tragic heroism based entirely on the features of the game world.

Because they make so much sense in the connection of game and gangster movies Daddar’s actions remain a significant social comment – a comment that visually and conceptually follows outlaw myths as established in cinema and other media. In this tradition, the piece ends adequately with the “money shot” of the outlaw riding on his horse into the open wilderness.

4.2. Gaming conventions caught on tape

A Day at the Ironforge Bank is a good example of an early *World of Warcraft* movie that consists almost entirely of edited yet otherwise unaltered gameplay captured on video. Adding custom-made material to the game world is very difficult due to the technical nature of the *World of Warcraft* game system. This imposes a lot of limitations on machinima production in this particular game engine. For example, it prevents any demo-recording, complicates complex camera work, and forbids in-game editing. Machinima artists using this game, thus, had to find other ways to circumvent the limitations and improve the range of available expression (e.g. they use the in-game model-viewer as a kind of green-screen studio). As *World of Warcraft* movies grew more complex, their creators also started to include more effects in post-production. Jason Choi’s acclaimed *World of Warcraft* film *Edge of*

Remorse (2006) uses post-produced color effects throughout, image compositing, as well as a lot of other audio-visual enhancements. It succeeds in delivering a stand-alone piece of computer animation that happens to be produced in a real-time engine. Its content and depicted actions do not reference the original game setting or tasks anymore. *Edge of Remorse* still uses the game's assets but not its rule system or functionality. For example, it excludes the ever-present graphical user interface needed to play the game effectively and uses a widescreen aspect ratio to mimic traditions of other film epics. Here, machinima leaves its gaming roots behind and turns into a technical production method only.

The aforementioned double-effect of playing and performing is also part of the *Leeroy Jenkins* (2005) film, which brought the online persona Leeroy Jenkins to sudden fame. The machinima was also created in the *World of Warcraft* game world but its legend spread into other online worlds and communities as well – a sign for cross-referencing also within the gaming community. The film itself is about a disastrous attack on a monster base located in an area of the game world called Upper Blackrock Spire. It starts with a group of player avatars assembling in front of the monsters' cave and preparing for a controlled attack. All turns into utter chaos when one player, Leeroy Jenkins, dashes for a surprising and seemingly spontaneous charge into the cave. The other players follow to rescue their overly enthusiastic comrade but the whole group dies miserably in the attempt. The *Leeroy* film uses audio dialogue between different players that adds depth and personality and is the source for most of the comic effect. The voices are not re-recorded but left in the lower sound quality of the original performance, adding to the impression of viewing a real gaming event. The piece also shows the typical *World of Warcraft* interface: mouse cursor, and other game-typical icons, menus, and information. Because all these insignia of the play are clearly visible and because the event is a continuous performance bar any post-production, the film might appear to the untrained eye as a kind of documentary of serious gameplay.

However, any experienced player notices that the event is not a tragic documentary but a staged comic action. Instead of a documentary of annoying and hazardous gameplay, *Leeroy Jenkins* is a recorded virtual performance that plays with the game's conventions. In fact, it draws its success from this intertextuality between game and film because a lot of the film's humor can only be understood if the viewer knows about the gameplay including proper in-game behavior, social structures of gaming groups, and game setting. The Leeroy incident became so famous that it grew into a part of the *World of Warcraft* history and entered the cultural circle that forms around this game environment precisely because it deals with in-game topics in an innovative and – as will be argued – also in a cinematic way. The film has been downloaded more than a million times from *Warcraftmovies.com*, a main web site for *World of Warcraft* machinima alone and it is a good example for the interrelation

of game and cinematic interpretation in the forming of a virtual world's identity and culture.

In terms of cinematic references, *Leeroy Jenkins* can be traced back to classic slapstick films and vaudeville performances. It includes headless races through enemy pitfalls, obvious miscommunication, and irresponsible spontaneous behavior driven by amazing incompetence and hubris. Leeroy behaves like an anarchic cartoon character; his companions are the seemingly more responsible counterparts and representants of "reason". From this outset the stage is set for a comedy snowballing from logical planning to chaotic mayhem. The piece picks up speed until its disastrous ending much like a classic screwball comedy. This is remarkable as the camera remains tied to the in-game restrictions of the *World of Warcraft* game. There is, for example, no cut or any underlying music in *Leeroy Jenkins*, which supports the audio-visual style of a continuous in-game "fake documentary". At the same time, it re-positions the film in the neighborhood of traditional one-reelers that conserved vaudeville acts in a single shot.

Like *A Day at the Ironforge Bank*, the *Leeroy Jenkins Film* is a far cry from classics such as the Marx Brother's *Duck Soup* (Leo McCary, USA 1933) or the mastery of Keaton or Chaplin but it points in those directions to create the necessary intertextual references or at least the underlying associations. Their cross-media operation is key to understanding how they operate. One has to know about the artistic traditions of film *and* game to fully grasp these machinima pieces. The Leeroy incident does not work like a text-based story or a single screen-grab just as a Keaton stunt does not work in a single image or a short story. Both need to be performed and recorded to remain accessible. The impact of game-ness on the performance and replay methods in machinima adds a new point of reference. The cinematic tropes machinima quotes might be universal but their specific realization is highly adapted to the world of video games.

Ultimately, all the mentioned machinima operate in the context of narrative cinema. *Edge of Remorse*, *A Day at the Ironforge Bank*, and *Leeroy Jenkins* all tell stories and tell them in cinematic ways but with varying levels of game references. Their intertextual variations exemplify the range of machinima within a single game engine as it connects to theater as well as film genres, playing with these references throughout.

5. Conclusion

Machinima lives in a space in-between: between film and live performance, game and theater, code and physical action, staging and game play. The balance is held

by the specifics and the technology of the video game that supports live event generation and recording on the one hand, and the construction of the moving image with its cinematic traditions on the other. It is in this triangle of intermedial references that machinima is on a constant move. Is machinima an expression of the game or a game-enabled cinematic technique? There is no single answer to that, which is why machinima remains an exciting and rather flexible field with a lot of creative opportunities. This field can inform other media crossovers such as interactive television or virtual theater. Because machinima is still driven by the player community, it is also a good indicator of what is possible in terms of larger audience acceptance.

The players, audiences, and producers of machinima grow with expanding media literacy. Their new generation can make the transitions between playing, performing, and watching an event without considering them as breaks of any existent textual format. Their media literacy seamlessly connects between ludic game actions, narrative film, and dramatic live staging. Machinima stands out as a prime means of expression of such intermediality and as a good playground for more experimentation.

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