http://m.understandingmachinima.com/chapter3/

Be(ing)Dazzled: Living in machinima

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> *In the creative function of language non-truth or less-than-truth is, we have seen, a primary device. The relevant framework is not one of morality but of survival. At one level, from brute camouflage to poetic vision, the linguistic capacity to conceal, misinform, leave ambiguous, hypothesize, invent, is indispensable to the equilibrium of human consciousness and to the development of mankind in society.*
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> ~ George Steiner (1998, 239)

Consider as an aspect of the avant-garde art cinema movement (as characterized by P. Adams Sitney (1979) and represented by artists such as Maya Deren, Stan Brakhage, Hollis Frampton *etc*) the denormativizing of cinema. These artists/filmmakers took accruing cinematic sensibilities and built alternative artifices that evaded, glancingly addressed, or completely ignored pluralistic

cinema. Works had glaring apparency, enacting their own type of dazzle, such that some were difficult to watch while still commanding attention– i.e. http://youtu.be/mTGdGgQtZic. Their status as cinematic spectacle could elicit thoughtfulness in an age when one cultural act occurred at a time. Now the focused attention that these avant-garde strategies required might not stand a chance. Michael Snow's *Wavelength* (1967) https://www.youtube.com/watch?v=aBOzOVLxbCE becomes another ambient channel of media decoration, helping to illuminate our smartphone keyboards while we catch up on our Facebook posts (at least until it is re-scripted: http://youtu.be/AhN9RS60QRc). We aren't teasingly vexed by its set-up and inevitable conclusion, attentive to occurrences that might undermine its own bet, such as the changing of film in the camera when it runs out. We used to go along with this (at least some would). Those who did had a belief, or at least a hope, that their efforts might have a revelatory reward. It was a cinematic aerobic workout right at our lactic acid threshold of attention span, spurring new questions about a changing relationship to cinema.

The mid-20th century's media artist's agency was to be a radical alternative to an aesthetically and ideologically conservative, slow-moving and entrenched status quo of mass culture. But with the digitization of media forms, the invention of new mediums is as available as sites of action for the artist as existing forms were to their content. Contemporary media art production now has the creation of its form as an aspect of its stakes (even when this isn't undertaken, it is still present as an option not exercised). What might be the possibilities that media artists have when new mediums, such as machinima, emerge? How does the cultural role of this nascent (and possibly transient) form inform the types of engagements that the artist might employ? Machinima has already achieved a certain level of codification such that aficionados recognize it when they see it. It operates as a sub-cultural expression – which can be simply

characterized as "movies made with video games" – yet I will argue that it expresses cultural trends which extend beyond this simple description. In this chapter, I will trace the machinimatic impulse as coming from a more general condition of how cinema now operates in culture at large – from its ubiquitous permeation of the physical world to how it provides a framework for our imagination. Machinima's evocation of the operational activity of video game play, colliding with the narrative allusions of the cinematic, suggests a means of cohering aspects of the contemporary into a meaningful framework. Using examples of my own art installations to reveal aspects of what has emerged as machinima, I will show how several artworks of mine have both prefigured and continue to expand the range of what is now called machinima.

Naming this set of cultural activities demonstrates that there is enough commonality in forms of expression and enough uniqueness from pre-existing forms (in this case, things such as demos, computer animation, speedruns, gameplay recording or cinema in general) that expressive intent can take advantage of cumulative practices to create an increasingly sophisticated syntax. At least, that is how we came to understand the development of media forms in their pre-digital days when they emerged every few decades or centuries. Now the digitization of media production and distribution brings a continuous proliferation and hybridization of media forms. So what is the use of concocting the neologism "machinima" right now? Can there be a *productive* tension in having some common, recognizable forms of its practice, along with an imaginative and expansive application of its underlying methods? Cinema as a concept has proven to be a useful idea, both allowing for the development of complex semantic methods that have broad cultural legibility as well as providing a platform for gestures that radically reconsider the basis by which its underlying qualities can be employed for meaning making. In the history of cinema, we have seen this take place through activities that build its methods from within its normative tradition as well as by

activities which are determinedly positioned outside of its typical cultural operations, such as in the works of the artists mentioned above. Machinima may not have arisen from the specific acts of the cultural vanguard, but, as I argue, its coming was prefigured in both mainstream cinema and in some of the artworks detailed below.

Cinema worries about its future

In the 1980's and 90's, cinema saw the coming of virtual worlds and how they would trouble its cultural role. Movies presented these coming virtual worlds as alluring alternatives to living in the resistant, compromised, messy, costly and limited real world. These virtual worlds would also supersede cinema as culture's principal fantasy machine (see Katherine Bigelow's *Strange Days* (1995), Wim Wenders' *Until the End of the World* (1991), Oliver Stone's *Wild Palms* (1993), and David Cronenberg's *eXistenZ* (1999) as among some of the better examples). In these speculations, we considered implications of this new mode of quasi-cinematic being, with cautionary tales of an upstart new medium that was going to collapse the fantasy of cinema into the real lives of an audience left without the guiding hands of directors, screenwriters and cinematographers to make sense of these experiences for us, the audience.[1] But while cinema about virtual worlds might give us one way to wrestle with their implications, cinema *from* virtual worlds gives us much more, including what is increasingly the form, methods and future role of cinema.

The primary problem with the above examples of cinematic examination of virtuality is that they treat the virtual as distinct from the cinematic. Machinima, on the other hand, comes about by a deliberate collision of the two; it is a cinema born from the virtual. It creates a space of meaning that illuminates the roles that each of these two realms plays in constructing experience and meaning, performing an Eisensteinian montage clash between mediums. And it is through a

particular type of montage, discussed below, that we might find a useful antecedent to illuminate the emergent operations of what we are now calling machinima.

Art provocations towards a messier future

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

As cinema becomes a native digital medium rather than merely a form translated into digital methods, fundamental changes likewise occur in its ontology: what is cinematic representation and who are we as viewers, creators and participants in cinema? This is an expansion of the typical use of the category of machinima as movies made with video game engines, whose mode, methods and implicit semantics can seem to narrow its purview to an examination of being that arises from video games or virtual space. Instead, it might be useful to

see machinima as a sense-making schema operating in a manner that isn't confined by virtual realms, but is attenuated to our general state as inhabitants of physical and virtual worlds which are both scripted and each day become increasingly intertwined. The concept of machinima revises relationships between authorship, viewer and cultural artifact, providing an expression of the complex agency we have in a post-cinematic world in which we exist in coded spaces – a condition that emerged in the late 20th century and that is now pervasive.

Art anticipating machinima

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

The cinematic narrative of "MetaStasis/MediaStatic" is a product of automated editing. Its compositional method is an algorithmic cut-up of the found objects of tele-cinematic broadcast

space, owing more to Terry Riley, William Burroughs and Marcel Duchamp then it does to Sergei Eisenstein. The pacing of its edits starts at a pace that is familiar to any channel surfer, but ramps up to a fervor where it becomes part of the logic of the time of the frame. This speedrun through the channel space ascends to produce the climax of one's time in the "MetaStasis/MediaStatic" video shack, before ejecting the viewers out through its automated portal.

Montage as cinema machine

In "MetaStasis/MediaStatic", the exterior of the immersive chamber suggests that there are implications to the ubiquity of mediation. A follow-up work, "The Vorkapitchulator" (1993) http://www.sheldon-brown.net/vork/index.html takes as its subject the digital cinematic machine in the making, with its expressive launchpad provided by a particular cinematic method (Brown 1994). In "The Vorkapitchulator", a modified home exercise machine is mounted by a viewer/operator, face down, legs spread, head locked in place, arms turning cranks of a generator which propel the work into action. One's gaze is directed through a rack of computer equipment where a virtual image is cast into the machine space/set beyond. The digital cinema machine is built with a set of analog video cameras mounted on the various axes of a robotic lead screw, each decoding an aspect of the space it is moving through. A frame of cascading, rotating squares mimics the first forms of computer art, as well as the spinning newspaper headlines of "march through time" montage sequences. A pair of 3D cameras moves through a field of text, picking out letters to be turned into a faux computer graphic logo of statements, while the last axis is a zoetrope of imagery turned into cinema through the spinning camera at its center. The imagery and operation of the apparatus speak to the slippery transformations of the self that emerging digital identities provoked at the time. The textual fields consist of verbs from boy scout and girl

scout handbooks, with the expected bias found in each: the girls are encouraged to co-operate while the boys are spurred on to compete. The zoetrope is a frame by frame breakdown of gender reassignment surgery, while the exercise machine is the device to reshape one's physical body – each of the elements speaks to an aspect of the ways we are already invented and re-invented, while our digital identity presents us with radical new fluidity in these processes.

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

This re-use of cinematic assets gives us an idea about the coming of machinima, in which new scripts are authored with given assets of a virtual world. While new machinimatic narratives will range from those closely related to or spun off from the original game engine to those that are surrealistically orthogonal, the use of the asset or code base creates an inescapable relationship to its original. Contemporary cinema still uses the montage sequence, albeit often with less dependency on the visual surrealism of Vorkapich, although the sequence of "Gutterballs" in *The Big Lebowski* (1998) is a notable homage http://youtu.be/mHAGbD3dlhE, but also with

sensibilities as varied as the "last day as a wiseguy" segment in Martin Scorsese's *Goodfella*s (1990) [*link removed from youtube. Look for alternatives such as http://ffilms.org/goodfellas-1990/ and see segment starting around 113 minutes through 123 minutes)* and the "Shout" montage in the movie, *The Wedding Crashers* (2005) http://youtu.be/ZYIAu847HiE. In each of these, the normal cinematic narrative flow has shifted into a transcendent gear of operation. Experience has achieved an *optimal flow* (Csikszentmihalyi 1990), and the confines of the typical narrative structure are no longer required.

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

"Ain't nothing but a movie" (Scott-Heron, "B-Movie", 1981) **http://youtu.be/sLtRHN7fsqY**

If we've strived to live life as if we are in a movie, we have also increasingly made our world into a site of cinematic apparatuses. The car radio and the personal portable stereo were perhaps some

of the first cinematic experiential generation systems, and now we have screens everywhere in the world, cladding the sides of our buildings, embedded in the furniture of our cars and airplanes, and carried in our pockets on various mobile devices, some of which are still referred to anachronistically as "phones". We create mental montages as we drive around the streets or ride the subway or jog down the beach. Our (day)dreams locate us as the star in a solipsistic, automatic and pervasive theater, forming a transcendent relationship to the world that we glide through to our own supercharged soundtracks, living our own "last days as a wiseguy" http://youtu.be/sJQ8tjroAfE with the thinnest of artifice required. We re-frame our own movements through the world by the application of these templates to cohere and manufacture a meaningful experience of living in the world.

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

A function of machinima is arguably its mediation of virtual experience to human consciousness. How are we to consider the experiences of the virtual? Do we know when we are the reader, viewer or product of culture? Are virtual realms sites where we have vital experiences? Or is there some new hybrid of being and reading, creating and being consumed which is taking place here? Looking at machinima from perspectives of aesthetics and method, we can see a

trajectory in its cultural operations. Consider Vorkapich's montages: his surrealism may have been essential to the initial development of the pictorial and temporal compositional potential of the sequence, but its lasting impact has been in the function of its compositional structures. Much of what is now recognized as machinima is due to a dissonance between things that look like video games but act like cinema, an equation that, so far, lacks commutativity – it doesn't work in reverse – but this visual signifier might just be a temporary form.

Digital image aesthetics in machinima and cinema

Aspects of computer games and virtual space seem to beg to be considered cinema – they are experienced on similar screens and they can use similar pictorial, temporal and auditory compositions. Yet in the mainstream of both these forms, they create experiences which are best not compared. Thinking about video games as cinema is as useful as thinking about music as literature. There might be some parallels, but they are generally aimed at different things. This difference gives clarity to machinima as distinct from the video game. Machinima is considered on most aspects similar to any other cinematic form, or as a pastiche of a cinematic model. We recognize its form as being "like a sitcom" or "like a movie", but machinima gets its profile by its distinction from these media. It is like an episode of *Friends* (1994-2004) but it looks like *Unreal Tournament* (1999). Or it is a mashup of *Call of Duty* (2003) play but looks like *Pokemon* (1996) http://www.youtube.com/watch?v=Fz5VMrEvJhk (game to game machinima seems to have commutative properties http://www.youtube.com/watch?v=YBSvNy5ntbA).

This mashup parallels how the physical and the virtual are intertwined via their increasingly scriptable operations. When forms are scriptable, they become re-authorable as a means of participating with them. Participation with these forms includes such things as watching them,

interacting with them, clicking on them, linking to them and re-authoring them, or becoming involved with mediated elements in other ways either intended by authors or not. Re-authoring is a new cell in the matrix of author, viewer and player. It can start with a familiar, winking, ironic stance: http://youtu.be/fK8Pex_1K8A http://youtu.be/wWMgCQoOcY0 , or operate as a site for viewer/user cultural evolution. http://youtu.be/HdyOVDgKsgA http://youtu.be/GU1yQ7Zeqj4.

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

the world, computed in as little time as possible. Typically, these algorithms are not simulations of how metal achieves this visual effect; they are just attempts to create a visually acceptable image.

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

On the other hand, machinima, for the time being at least, trades on its aesthetic by clearly evoking the synthetic and digital world of the video game. Digital bits are not put in the service of extending the illusory cinematic veil, but instead celebrate the artificial realm of the algorithm. More than that, the visual signifiers place the works in a particular technological moment or situate the form in relation to latent readings found in a particular platform. We can usually pin down the date of most machinima productions to a few years around the release of a particular game

technology (*ie Unreal Engine 3* (2004)) or to when its technology (DirectX 9.0) had currency. The short shelf life of these underlying technologies, whose rapid obsolescence is voraciously pursued by the industries responsible for their production, is also another way in which the stakes of machinima may seem to be constrained to sub-cultural relevance (*ie* a *Legend of Zelda* (1986) soundtrack on a *Halo 3* (2007) image is soooo funny http://www.youtube.com/watch?v=ZbKZx2YapXM).

Consider this aspect of machinima as a contrary sensibility to digital cinema's industry-dominated aesthetic urges. While the game technology industry touts its latest progress towards some platonic notion of photorealism, machinima utilizes the visual artifacts of the game engine as a necessary signifier of the work, even as it no longer requires the computational dependency on real-time game engine rendering. Machinima productions could be rendered by a different renderer than the one in which the actions are captured and saved (described below in work that I've done). The visual aesthetic thus deliberately points to the initial game engine and often engages disjunctions of narrative content and visual form. It disrupts the "progress myth" of the game industry, which equates improvements in the medium of video games to achievements in photorealistic aesthetics. Here the visual vocabulary embraces the artifacts at hand as significant elements of the vocabulary of the form. If we reflect on the gestures of the avant-garde film makers which began this discussion, we see how visible sprocket holes, overexposed film, scratches and "mishandled" film stock produced a new vocabulary for cinema that was eventually taken into and extended the gestures of pluralistic cinema. By mining what are often considered to be the shortcomings of the visual forms produced by game engines, paired with radically different content, we get to see how far that visual language can be stretched, and what happens when it breaks.

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

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

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

what we have in the realms of the physical and of media. Machinima can choreograph the experiences within the virtual realm into a more succinct encapsulation, rendered into the form of cinema in which we currently have more cultural grounding. Beyond direct experience, scripting and editing open up consideration of the virtual realm by channeling its affordances that allow and demand the viewer to participate in authoring their experience. This opening is part of the subversive machinimatic gesture to the initial intent of the virtual world, and if subversive is too strong a term to employ (particularly as these realms increasingly include machinima authoring as a feature), then we can see how the process of picking and choosing pieces of the virtual realm to serve as components of a secondary authored form amplify and distort those initial intentions. Machinima enacts aspects of the possibility space of a particular virtual world that may lie beyond its typical operational modes and, as an intentionally authored derivative, gives an interpretive rather than operative reading. It provides a way of understanding the mediated realm that differs from even that which expert experience provides. If the virtual world has a seemingly limited expressive range, then machinima can expand its arc, *à la Pokemon* Gameboy machinima, which takes the elements of the game and applies them to new content. http://youtu.be/65UWxUeKnXU If the world seems to be a jumble of unfocused (but relentless) activity, machinima is a way to bring coherence to this jumble, re-articulating it in a familiar language, one which we believe has resolution as the dramatic devices of cinema lull us into a belief of closure. Machinima allows us to accept virtual space as a coherent, authored realm.

Just as Frances Yates (1996) described the operation of memory theaters, I see machinima as a memory theater of the virtual, with cinema substituting for architecture to provide the organizing metaphor. Machinima is our way of encapsulating our being in the virtual world, a way of remembering by script. It contains where we went and what we did, more travelogue than diary,

which we coordinate, organize, stage and experience. It provides a way of being which is neither purely reflective nor exclusively reactive, but concurs with gestures which proliferate across the ways we are with media in general. In its conflation of actor and spectator, it idealizes our being in the world and the world as cinema. Our response isn't driven by an interior state grappling with self-knowledge – we are actors in this world. As actors, the interiority is a script. The interior isn't us, but its *enactment* is: the gesture; the way we move through fictive spaces; our responses. Can we be known as we were in the 20th century? Are we still the same subjects we were before we lived in virtual space? How do our affinities, our Friends' lists, our Likes and our WOW levels define us?

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

This machinimatic conceit is a pervasive attitude. Variations are popping up as first order, deliberate systems, rather than from the initial, hacker stance. http://xtranormal.com, http://goanimate.com, Animoto and DigitalFilms.com take our uploaded texts and images as fodder for their templates of animations, interludes and animated slideshows. These machinimatic methods provide an organizing principle of cinematic clichés for the thousands of digital photos on our hard drives, just as machinima does to the endless frames of virtual experience we generate, becoming the convenient engine of our meditations. http://youtu.be/uSdHoNJu5fU.

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

All the world's a stage

With machimima, we get a circuit of representation that plugs the artificiality of virtual worlds into the illusions of cinema as a way of making a more substantial relationship to the real. It shows the viability of the virtual as a medium of translation and acts as a means of prototyping our ways of being in the world at large. With the virtual participating in the scopic operations of cinema, it attenuates our view and our visibilities. As the physical and mediated continue to gain characteristics of each other, our visuality becomes an asset to contend with. As we become a society that is increasingly involved in bi-directional gaze with cyberspace, the consideration of our views and our visibilities become more crucial (Branscombe, 2011).

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

AeroVironment, Inc., "Nano-hummingbird", http://www.avinc.com/nano

Increasingly subjected to all these eyeballs, we might correspondingly adopt strategies from our virtual agencies through an attitude of machinimatic authorship in the real. An overt apparency can be a method of dazzling the circuitry of the autonomous systems for a moment, much as World War One-era ships (http://www.oobject.com/category/dazzle-ships) or prototype cars of today utilize avant-garde constructivist paint schemes to befuddle viewers about what they were or are seeing and what the object might be doing. We thus have to move one step ahead of these consuming gazes by employing vanguard visual strategies, *à la* the concrete poetry of "captcha", or adjusting our fashion to either allure or evade our computational beholders (Harvey, 2011).

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

The Scalable City http://scalablecity.com

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

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

The Scalable City project is motivated by the ways in which the physical world is increasingly being created via the sensibilities and processes that we have developed in digital

media over the previous several decades. The "real world" thus becomes an expression of algorithmic desire, conforming itself for optimized algorithmic expression and consumption. *The Scalable City* extrapolates this situation into an interactive artwork similar to a computer game. Play consists of building virtual cities by interacting with data visualization processes. Satellite data and ground photogrammetry are transformed through a series of exaggerated algorithmic gestures. The forms of this synthetic world are obviously related to their originals in the physical world, but the process of their algorithmic digestion and re-manifestation ladens them with artifacts.

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

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

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

While this movie was being created, other aspects of *The Scalable City* were being developed into separate animations. In particular, the transformation of satellite imagery into patterned landscapes was turned into a procedural animation that has been shown as both a standalone installation as well as alongside the interactive environment. This can be considered as the second type of machinima.

The first version of the interactive virtual world installation utilized three stereo projection screens and was shown at the Ars Electronica museum in 2006. The central screen was the interactive experience, bordered by side screens which ran machinima scripts in the real-time game

engine of "before" and "after" game play conditions of the virtual world. This third type of machima I refer to as Eden and The Rapture.

The fourth type of machinima was a very high resolution movie made by capturing data from interactive play sessions. This behavioral data is used in the re-rendering of the assets with much higher quality algorithms than are possible for the real time graphic processors used in the interactive game. This is rendered at a very high resolution of 4000 x 2000 pixels per frame. A year later, I decided to make the left-eye view of this same data so that the movie could be in 3D.

The process of making this movie led to building a general machinima system into *The Scalable City*, creating a fifth type of machimima which has produced a series of technical videos has been generated, such as: http://sheldon-brown.net/downloads/cell_720.wmv, http://sheldon-brown.net/downloads/intel_trailer2.wmv http://xnor.ucsd.edu/IBMvideo_v17_lq_720.wmv

While going back and forth between cinema and games has been valuable in the iterative production process, the more important point for me has been to try and engage the different types of viewing that each mode produces. I discussed above the complex role of viewer/player/creator that comes from machinima; in *The Scalable City* I deliberately move the viewer between these roles, specifically in the way the work is displayed – large-scale, novel, contextually unique – with a sculptural interface that locates the "player" as an element of the piece, all of which is viewed by the other museum visitors. The work doesn't have to be played to be experienced; one can equally have a worthy experience through watching others. However, if you play, the responsiveness to the touch of the ball and the recognition of your agency in the virtual world as a tornadic force deeply involve you in the implications of the work. The employment of a cinematic montage of camera positions moves the view of the world from first to third person, potentially confounding the player and how comfortable she feels as a player of the world. The player may be

the cause of change, but she is only partially in control of her own agency. The work pushes her out of getting lost in it even as it pulls her into its uncanny acts of landscape transformation. And it is this push and pull into the piece and back out to the world that is the transformative process the work hopes to perform with its audience. You are not just playing a game disconnected from the world at large: *The Scalable City* distills elements of your actions in the world, re-staging them through its peculiar capacities.

Visual analytics in *The Scalable City*

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

Working initially with Lev Manovich and Jeremy Douglass, I've also been developing cinematic renditions of players' behavior in the virtual world to determine if a player is having interesting aesthetic experiences. There are multiple types of these movies, ranging from recordings of what the player sees to movies that map particular aspects of players' experiences onto novel articulations of the virtual asset base, or visualizations of players' activities in the physical world correlated with their virtual world activities, creating a sixth type of machinima used in this project. Some early examples of this can be seen at http://crca.ucsd.edu/sheldon/downloads/Final-scalable_city-unfoldbox-q-datafading-c.mov.

Making determinations about the quality of aesthetic experience for many simultaneous visitors over long periods of time would be difficult to do by watching the play sessions of each

online visitor. However, by making cinematic visualizations of different data sets generated within the virtual world, we are devising methods by which the visual qualities of these machinimatic encapsulizations can be analyzed to make assessments of activities, by which the virtual world can also then be adjusted accordingly.

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

It can be the case that machinima playfully distorts virtual experience for its narrative ends http://youtu.be/9BAM9fgV-ts. However, in *The Scalable City* project, it is used to clarify and develop virtual experience. There is an aspiration of creating a virtual world experience that itself is able to provoke readings that are elusive of either cinema or video games, turning what otherwise might just be seen as actions in space into meaningful structured activities which draw upon our collective narrative history to establish implied relationships between self, other and surroundings. The reality of the virtual is key to its efficacy as a site in which one is an actor having experiences, and it is part of the lure of machinima, evoked through the aesthetic of real-time graphics, that this reality is the basis of the machinima product. However, it is just as much a willing suspension of disbelief as it is in normative cinema. Machinima is a kind of dazzle of the virtual, an insightful brilliance which is both clarifying and confusing. It gives the virtual vivid apparency, clarifying aspects of its operations, but just like a military camouflage strategy, its stark visuality can also be an overt distortion of the virtual experience. It turns out the virtual is just as capable of being manipulated as the real.

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Notes

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

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