Video Games as a Production Tool

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Installing

In 'Understanding Media' (2001), Marshall McLuhan writes, 'Games are popular art, collective, social reactions to the main drive or action of any culture' (2001: 255). He further suggests that games were a form of collective art at the heart of non-literate societies as a means to model the universe through enactments. Alex Stockburger in his paper 'From Appropriation to Approximation' published in Videogames and Art' (2007) writes that 'Fluxus art strongly employed various games structures such as participation, chance and the examination and dramatization of rule based behaviour' (2007: 27). With gaming being widely used as a basis for art production, is it any wonder with the advent of computer games that they too should not be used in the same manner. As Christian Paul suggests in 'Digital Art' (2003) 'Games are an important part of digital art's history' (2003: 197).

In 1993, Doom was released. This was ground breaking insomuch as before the official release, a free version was made available along with descriptions of game formats and an editor. ID software was actively encouraging players to expand the basic game by creating new levels. As Manovich recounts in 'The Language of New Media' (2001), '... hacking and adding to the game became an essential part of the game, with new levels widely available on the Internet for anyone to download' (2001: 245). Modding, as the practice is known, in tandem with patches have increasingly become a means for the gamers to have some creative input. Possibly one of the first art exhibitions that made use of modding and patching was the online exhibition curated by Anne-Marie Schleiner in 1999 called Cracking the Maze. In her curatorial statement, Schleiner discusses how the mods and patches distributed via the

Internet have potential for subversion. As way of example she explains how some mods for Doom were the first inclusions of female characters first-person shooter (FPS) games. She further writes

> 'Although some artists have successfully created games as art, producing a game patch as art offers certain advantages over building a game from scratch. [...]the parasitic game patch is also a means to infiltrate gaming culture [...]game hacker artists operate as culture hackers who manipulate existing techno-semiotic structures towards different ends'.

Rebecca Cannon in her paper entitled 'Meltdown' reproduced in 'Videogames and Art' (2007) writes

> 'As work within this field has continued, categories have emerged. Each of these can roughly be defined by technique and outcome [...]Each category fulfils various artistic motivations and outcomes. Machinima fulfil the role of screen-based narratives, [...]Sonichima are sound works [...]Art game mods and political game mods place less emphasis on commercial success [...]Generative art mods exploit the real time capabilities of game technologies [...]Performative interventions disrupt in-game norms [...][and] Site-specific installations and site-relative mods compare similarities and differences between real and virtual worlds' (2007:40).

Whilst there is an ongoing debate as to whether video games can be considered an art form, this essay is more interested in the video game being

used as a tool to produce art. By citing works and examining the methods and techniques used, it will argue that video games are just as valid as an artistic production instrument as a paint brush or chisel.

Level 1

Machinima is an amalgamation of the words machine, animation and cinema and is a method of film-making using a 3-D game engine with the gamers acting out a script though their avatars as a form of digital puppetry. The action is recorded, edited and put through a post-production process much like any 'real life' film. There are essentially two forms of machinima; basic where the characters and maps remain unaltered and complex using new textures and maps specifically constructed for the movie. A good example of a 'basic' machinima production is the Red vs Blue series. The script is acted out within the native Halo game using the native Red and Blue characters which are then given voice-overs by the production team. Cannon explains, 'Elements of computer-based play which one takes for granted as a player – eg competition, the game scenario, characters being controlled by a force external to the computer – in Red vs Blue becomes parodied for philosophical enquiry' (2007: 43).

However, many machinima productions bear little resemblance if any to the original game that they utilise. Friedrich Kirschner's The Journey, person2184 and the photographer, all produced using Unreal Tournament 2004, are as far removed from the FPS as possible. Using tools released with the game, The Journey depicts a humanoid form breaking free from the usual day-to-day drudgery to see what lies beyond whereas the other two show 'queer happenings in urban environment not very far from here and now' with no space marines or blasters in sight. As well as the complete departure from Unreal's FPS style, what is also interesting of Krschner's work is the way that he distributed his movies. By releasing them as source code, the viewer is

required to have the full version of Unreal Tournament in order to watch each of them. The most obvious advantage of distributing his movies in this manner is the reduction of file size in comparison to a Quicktime or Windows Media movie and consequently keeping download times at a minimum. Code-based machinima movies will usually consist of maps and skins that need to be installed into the game as if it was a mod in its own right.

For Katherine Kang, the founder of Fountainhad Software, machinima is a new art form. She believes: 'it has yet to prove itself. If game technology moves forward at the pace I believe it will, machinima will revolutionize animation' (2007: 75). Whether this belief is proven or not, 3-D game engines have already shown that they are capable of producing high quality animated movies.

Level 2

The real-time formula of games makes them ideal as a performance instrument. An early example of this is Quilted Thought Organ by Julian Oliver. Built using Quake II, it allowed the player to trigger audio events attached to objects within the game by exploiting the internal collision detection to create a 3-D musical synthesizer.

Oliver's work in game-based sound production resulted in him creating the term sonichima described as 'Audio Compositions made using an existing computer game as the performance medium and playback device. In the manner of machinima, sonichima is made by playing the game. A minimal amount of mixing between games and/or post processing is used' (2007: 44)

With q3apd, this time in collaboration with Steven Pickles, Oliver produced a multiplayer, networked tool for collaboraive sound production. Consisting of custom-built Quake III mods loaded into the game, it delivered gameplay data such as bot and player location, view angles, weapon state and local texture over a network into Pure Data (PD). PD then used this data to synthesize audio. Although any Quake III map could be used, Oliver and Pickles' maps were carefully built so that the dimensions and the placing of textures resulted in a more dynamic, versatile environment for music production.

They have since released and continued to develop an engine specifically for real-time audio/visual performance. Called Fijuu it is based on the open source game engine Nebula and allows players to dynamically improvise music via Playsation 2 gamepads. Any of the six unique 3D instruments can be sculpted by the player to manipulate forms and changes in the signal result. At any point the player can record a segment, represented as a spinning ring in the gamespace. By layering recorded segments and changing the amplitude and rotation speed of these segments, compositions can be quickly produced. This turns the ordinary household PC into a console for audio performances.

Level 3

Most people in the West would consider themselves 'media-savvy'. Despite being bombarded with subtle persuasion techniques dreamed up by advertising agencies, the general population as an audience view these with an awareness and knowledge of these methods and yet still believe that they are able to make educated decisions based on their own personal filters. And yet, this media awareness does not appear to extend to computer games with the majority of the population viewing them with suspicion. This was something that Brody Condon experienced when exhibiting Adam Killer, a piece of work consisting of eight mods to Half-Life with multiple versions of an avatar , called Adam, dressed in white trousers and T-shirt standing idle in a white plane inviting the player to interact. By exploiting a bug in the level editing software of the game, Brody was able to create a harsh trailing effect everytime an Adam was killed, turning the screen into a chaotic mess of blood and fractured textures. The first time he showed the work a woman audience member started crying and another started yelling at him about the level of violence. Of this, Cannon recounts:

> 'Intensely frustrated with their myopic reading of the work, Condon threw a chair against the wall to shut them up. He then asked them to make a distinction between the reality of the act and what they saw on the screen.' (2007: 47)

Condon created the piece as a form of release. Cannon quotes him:

> 'As soon as Adam Killer was functional, I sat down and shot Adam again and again for about an hour. Every time I stepped back and looked at the carnage, all the bloody Adams on the floor, I felt a

sense of release and peace, like all was right with the world.

(2007: 47)

Although it has been installed in many galleries as an interactive piece of work, Condon has said that it works best in a private context amongst people who understand the origins of the game or even in a lecture where he is able to provide information as it is being played. It questions whether we possess an urge to kill or has it been suppressed by civilized behaviour and if it has, does it cause more damage than would a virtual killing spree?

Protest in online games is not a new phenomenon. Whether it is because of glitches over the software or the anti-MacDonalds protest over its introduction into The Sims, networked games as with any networked community offer a platform for ideological expression. Condon, Anne-Marie Schleiner and Joan Leandre produced a patch for Counter-Strike called Velvet-Strike. Conceptualised during George Bush's war on terrorism, Velvet-Strike is a collection of spay paints to use as graffiti on the walls, ceilings and floor within Counter-Strike's game space. What was an anti-war protest seemed to invoke a protest of its own amongst the gamers. Cannon writes:

'This […]intervention into Counter-Strike gameplay was perceived by many gamers as an attack on their right to enjoy a violent game. The response by gamers to Velvet-Strike was one of defensive anger. Their anger at the interventions was so heated that it became a telling element of the creative project itself, as flamers spouted their opinions via e-mail and in the online forum' (2007: 48).

According to Cannon, the gamers automatically assumed that these actions had to be made by critics of games and violence in games and consequently invoked a siege-like mentality of us against them – the 'them' being anyone from outside of the gaming community. As Cannon explains 'Most gamers were unable to consider the project as a more abstract exercise in creative self-expression' (2007: 48). She further writes:

> 'As a potent online intervention, Velvet-Strike highlights the debate over how much of a right players have to assert their co-authorial desires within games, beyond the opportunities already granted them via the game scenario' (2007: 49).

This does seem to ask us to reflect on free speech. Is adding a patch to 'spray' symbols on virtual walls worse than a patch that enabled a gamer never to be killed within the game space?

Level 4

With generative art mods, the artist makes use of the real-time element of the game. Alison Mealey has been exploring this with her work entitled Unreal Art by experimenting with Unreal Tournament. By utilising a process called bot pathing that is used as a way of intelligently controlling non-human players around the map, she is able to heavily influence the AI players (bots) within the game. The x, y and z coordinates of the bots as they follow the paths are collected and logged by two custom built mods (known as mutators) to the system logfile of the game which in turn are then passed to two scripts developed in Processing. Two mutators are needed as this allows her to create a static image written as a postscript file with the other one creating a live drawing as the game is being played.

The images produced have been compared to pointillism insomuch as both are composed of dots and that standing close to both results in a mass of dots being seen but stand further back and the image becomes apparent. She considers her work to be very accessible, as she explains in the project documentation:

> 'During the exhibition I noticed that people generally enjoyed watching the drawing take place in front of them, and were quite happy to stand [and] stare at it for a while [...]the completed images are something that people can instantly appreciate without getting too caught up in the technology that goes on behind them.' (http://www.unrealart.co.uk/history/Project.swf)

Generative art using game engines is another area that Julian Oliver has explored. ioq3aPaint began with a project called q3aPaint which experimented with using a video game, in this instance Quake III Arena, as an automatic painting system. By exploiting a redraw glitch in the game, and introducing a variety of modified software bots, action in the arena was transformed into brush-strokes and colour. The results from the project prompted more research and from that ioq3aPaint was developed whilst he was Artist in Residence at Georgia Tech University, Atlanta, Georgia. ioq3aPaint extends upon the work of q3aPaint by adding live palette manipulation and uses only Open Source software components, namely the community maintained version of Quake III, ioquake3. Although the pieces produced via ioq3aPaint have only been exhibited on screen, some large

physical paintings have been produced for display in a more traditional exhibition.

Unlike the two pieces of work above, Tom Betts' net art QQQ does not use automated bots to acquire data, instead he uses the data generated by online gamer activity. Betts runs his own Doom server on which players of the FPS can play against each other online. The data they generate whilst playing is collected and used by him to produce an art work that is a deconstruction of the graphics of the game. Either on a monitor or projected in a gallery, the piece is quite often quiet with nothing displayed or heard over the speakers, but at night and over the weekend when the gamers have logged on and are battling against each other, it will suddenly activate as they unknowingly influence the aesthetics produced.

Much like traditional artists using apprentices to do the more mundane functions to produce artwork, so the artists above have used games and exploited their inbuilt techniques as if they were their own personal digital apprentices.

Level 5

Site-specific installations interrogate the actual and perceived differences between the physical and virtual world. Normally they replicate an exhibition, museum or gallery in a game space. Cannon suggests that these installations whilst being fun to play with are a good introduction to art mods for the audience. She writes 'They allow the user to analyze how their experiences in a virtual space affect their relation to the real equivalent of that virtual space

once they walk away from a game' (2007: 46). An example she gives is Chris Cornish's Repeater series in which he reproduces a series of museums within Red Faction. Participants can explore, interact or even destroy their present surroundings by shooting expensive artwork within the virtual game world before visiting it in the real world.

Another interesting example of a site-specific work is Cyber Café Killers by Eric Cho. The site it reproduces is a networked gaming environment which by its very nature is already full of the thrill of game play. In this piece, players kill their opponents who are sitting with them in the café, just as they would in any normal networked gaming environment. However this virtual reproduction is a catalyst to a psychological experiment. It engages standard emotional responses gamers have to the closeness and reality of their opponents and then amplifies these responses. Firstly by making the players aware that these responses exist and secondly by providing them the opportunity to test the extent with which they can be manipulated. Cho sees this as a response to theorists who try to understand the feedback loop between real and virtual violence without ever actually playing games. For him the answer is summed up in the concept of euphoric rage; a complex emotional blend of aggression and excitement, compounded by the thrill of the adrenaline-charged game play. The cyber café provides the natural breeding ground for euphoric rage and Cho views this as the romantic appeal of the context, seeing the agony of defeat mapped in real time on the faces of the players sitting opposite you.

Container by Stephen Honegger and Anthony Hunt is a full-scale replica construction of a shipping container opened at one end. At the other, inside the container, is a machinima video projection. As it unfolds, the viewer is engaged in a dislocation of time and place. After entering the gallery, the viewer 'leaves' into the container to watch a movie in which they proceed to re-enter the gallery and then re-enter the container. As Cannon explains, '[Container] explores the power of gameplay to bridge the perceived divide between real and virtual experience' (2007: 46).

9/11 Survivor is a mod for Unreal Tournament and was built by students as an exercise in level building although it was introduced to the world as a new PC game. The 'game' picks up moments after the World Trade Centre was hit by the aircrafts and depicts a lone survivor walking around one of the top floors, contemplating his fate before jumping out of the building to his death. The player cannot control him, there are no power-ups, no rewards, no challenges; the viewer can only interact with the piece by controlling the camera angle. Cannon writes that if there was an emotional response to 9/11 then it probably occurred to the mod makers during the construction of the mod. It certainly was not amongst the gaming community who would make their avatar wait on the floor waiting for the bot to land on them.

With their inherent 3-D gamespace, it is easy to see why artists and designers would use mods to represent real world spaces and objects and use them to question the actual and assumed differences between the real and virtual spaces.

License Agreement

In the last few years there has been a cultural shift in the evaluation of video games. What was once perceived as children's toys during the 1980s have now infiltrated the whole of society. With such proliferation, it was inevitable that artists should turn to them for inspiration and materials. As more and more games are being released with tools to enable the gamer to extend and expand on the base game via the construction of mods, computer games are essentially being turned into development software and in so doing, this has given the artist more scope with which to use games within their work.

Machinima has matured both technically and artistically to the point that both the New York Times and the New Scientist are suggesting that this art form could pose a serious threat to the Hollywood blockbusters produced by Pixar and Disney (2007: 60). Although they still have some way to go before becoming a viable threat to these established film studios, with the obvious benefit of being low cost in both their making and distribution, it cannot be long before machinima movies become more mainstream.

Playing a computer game generally involves some element of real-time performance so it is natural for interactive art mods to behave as real-time performance instruments. Although the examples given in this essay focuses more on the performance as a result of the player's contribution in the virtual space, that does not diminish the game engine as a potential instrument. Passing the data produced into another program to generate the music is as valid as using an amplifier with an acoustic musical instrument, both are there simply to boost the original instrument.

Data produced from a game is at the heart of the methodology for artworks produced via generative art mods. Some of the pictures produced have been compared with more established art forms such as pointillism or abstract. Despite none of them being produced with paint brush does not make them any less valid or aesthetically pleasing.

Producing mods to replicate real world sites is a logical step to take from creating levels for a game. Running around blasting artworks in a replica virtual museum would certainly appear to be an enjoyable way to initially experience the location.

Using a game engine to produce a piece of art is still in its infancy, however the examples given hopefully show that modding games is a distinct artistic movement and is worthy of being taken seriously as an art form.

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Exhibitions

Cory Arcangle Spacex, Exeter 14th December 2007

Lovebytes Sheffield 21st March 2006