

# FORUM

University of Edinburgh  
Postgraduate Journal of Culture and the Arts  
Special Issue 02 | Summer 2008

<b>Title</b>	In Arcadia: Landscape filming in a toxic wasteland
<b>Author</b>	Corrado Morgana
<b>Publication</b>	FORUM: University of Edinburgh Postgraduate Journal of Culture and the Arts
<b>Issue Number</b>	Special 02
<b>Issue Date</b>	Summer 2008
<b>Publication Date</b>	01/08/2008
<b>Editors</b>	Ana Salzberg & Gesine Strenge

*FORUM claims non-exclusive rights to reproduce this article electronically (in full or in part) and to publish this work in any such media current or later developed. The author retains all rights, including the right to be identified as the author wherever and whenever this article is published, and the right to use all or part of the article and abstracts, with or without revision or modification in compilations or other publications. Any latter publication shall recognise FORUM as the original publisher.*

# In Arcadia: Landscape filming in a toxic wasteland

Game engine affordances and post-game narratives

## Abstract

This paper discusses the production of artists work using existing videogame engines. It considers transgressive negotiations and engagements within the simulated gameworld that differ from the usual type of engagements that affect a nominal gamer. It considers the affordances that a game engine has in effecting creative practice and how these affordances can be discussed as post-game narratives. It uses anecdotal descriptions of these negotiations as a review of practice, whilst producing video grabs from within 'S.T.A.L.K.E.R.: Shadow of Chernobyl'. This was towards a collaborative artwork with audio artist Angus Carlyle. It later describes the nature of post-game narratives as documents of intentioned performative activity and practice and as an engaging method for reflection on such practice.

The paper was originally intended as a reflexive practice review and combines a discussion of motivations and intentions with a more anecdotal account. This anecdotal account was originally intended as an amusing email/ mailing list post to colleagues. The paper is in two parts, the second part considers post-game narratives and offers some examples.

Videogames, whether immersive simulations or abstract puzzlers, impose their own set of internal logics upon the player. If the player decides to transgress or subvert the rules or normal behaviour without directly affecting the software system itself through modification or hacking, these same internal logics still affect the player or 'subvertors' behaviour; the videogame has its own set of affordances, the properties that an artefact or system has that influence interaction.

My colleague Angus Carlyle and I have been collaborating on a project entitled 'In Arcadia'. The work, which takes the form of a series of moving image pieces, uses video game landscapes as their material. This form of praxis is commonly known as machinima, using video games for the purpose of non-interactive moving image production, a contraction of the terms machine and cinema. The work explores the notion of constructed landscapes within a traditional image-making paradigm such as classical painting and photography. The project uses constructed audio from real world field recordings and imagery from existing videogames to offer an examination of constructed virtual fields of representation and also an examination of the negotiations within such fields during the works production. In my own particular research practice the term 'productive agency' has become critical. Productive agency has been discussed by Schwartz and Okita (2006) as 'a simple theory of agency for learning. Agency is a system of production where people produce themselves in the world materially or socially and they observe themselves reflected back through the independent behaviour of their creations.' These 'independent behaviours' can be mapped, analysed and later interpreted through descriptive methods.

The initial idea was to take scenes from first-person shooter videogames on PC and find virtual landscape scenes that ape traditional notions of pastoral image-making, ie romantic notions of painting and photography. Existing audio from the games would be removed and the scenes re-scored with audio taken from real world field recordings produced and edited by Angus, whilst I recorded or captured video footage from the

games themselves. The video captures were initially taken, in our early studies from various first person viewpoint games such as Call of Duty 2, Battlefield 2, BF 2:Special Forces, Oblivion and S.T.A.L.K.E.R: Shadow of Chernobyl. These games were chosen because of their realistic simulated representations of forest, valley, river and other nominally pastoral landscapes.

The scenes were to be of parts of the game environment that were 'off the beaten track', areas of the game that are not key gameplay locations but presented picturesque, composed shots. After capturing and evaluating a sequence of short 2-3 minute preliminary test sequences, we decided to only use relatively realistic soldier simulators and not fantasy scenarios as in Oblivion or Morrowind. Soldier sims were chosen as there are very few other videogame genres that offer high quality first-person immersive simulations which can potentially contain outdoor environments which can be repurposed as our interpretation of constructed, idyllic realities. Battlefield 2 was rejected as its landscapes seemed too Middle Eastern or Oriental, BF2: Special Forces, even though it's environment is more European seemed too urban. The transgressive nature of searching for peaceful milieus within violent scenarios had particular ironic resonance.

The videos were captured in-game using FRAPS screen capture software. One of the limitations of Fraps is that it will capture up to 4gb then create another file causing a break in continuity, thus captures are limited to about 3-4 minutes at a high enough resolution to allow cropping and other visual manipulation such as zooming into parts of the image.

All onscreen paraphernalia such as mini-maps and radar were cropped out of the footage at the editing stage, most of which occurs at the edges of the screen, targeting crosshairs and visual representations of player weapons were removed via in-game options. The shots that would be chosen would have some subtle motion within the frame, changes in lighting, scudding clouds, rainfall, rippling water or wind-blown trees and grass. Angus would provide an alternative audio track based on real world field recordings that he had produced, giving an alternative soundtrack that matched the visuals but was re-scored from real world sources.

After some deliberation S.T.A.L.K.E.R: Shadow of Chernobyl was chosen as the environment to work within as it provided visuals closest to our ideal. This is a relatively freeform soldier sim based around the Strugatsky brothers (1971) novella 'Roadside Picnic' which was later adapted for film by Andrei Tarkovsky as 'Stalker' in 1979. The game takes place in the near future in Ukraine after a fictional second explosion near the defunct Chernobyl nuclear reactor near Pripyat. The affected area in all three variants is known as 'The Zone' where outlawed Stalkers seek mysterious artefacts. The player is driven exonerably to the 'wish giver', an in-game analogue of Tarkovsky's 'room' and the Strugatsky's 'Golden Sphere' that will grant those that dare find it their innermost desire (not all that it seems) or a confrontation with the usual sinister scientists behind the whole mess. In the meantime, the player engages, usually violently, with various mercenary factions and autonomous in-game NPCs (non-player characters): 'beasties' (my term), artificially intelligent (within the games parameters) roaming packs of mutant dogs, mercenaries and other adversaries amongst the abandoned buildings, vehicles and laboratories. The game features in-game 'anomalies', areas of the landscape where the normal rules of physics do not apply. These are also found in the Strugatsky brothers' novella and are also represented on celluloid by Tarkovskys mysterious tunnel, 'the meat grinder'. These are represented in-game by shimmering and flickering areas within the landscape that function as hazards that can literally rip a player apart through extreme gravity or electrical activity amongst other

highly detrimental effects. Coupled with areas of radiation; drink vodka or take a pill to alleviate the symptoms with associated blurring of vision, the game presents a suitably dystopian, hostile and toxic environment with peaceful interludes that give the player the opportunity to stare at scenes of eerie natural beauty. Unfortunately, early video captures that I initiated were marred by the presence of the aforementioned 'anomalies' flickering within the shot. Although this adds a reference to the game as source material it was felt that these reference the game's internal narrative scenario or ludic logics and was too much for the intention of the piece. Other shots within the environment were also unusable as various 'beasties' were present at the periphery of the shot. It was decided that the final footage should not have any of these visual artefacts present. We decided to remake the visual component based on our selections from the previous 'rushes', setting parameters for my captures within the game environment, i.e. weather conditions, time of day, and location. These decisions, based on the 'rushes' video captures, would dictate Angus' choice of audio score.

The completed piece, 'In Arcadia: S.T.A.L.K.E.R.', used visuals overlooking a shallow valley with trees in the middle distance and foreground. Angus' score created an idealistic English soundscape with the sound of hedges being clipped, distant voices, birdsong and light aircraft overhead. The soundscape creates a strange disjunction with the visuals, the audio is nostalgic, idealistic; its composition is deliberately constructed and synthetic, even though the audio quality is of an extremely high standard. The audio creates a strange sense of unease; the presence of human activity is out of shot, heard but not seen, eerie and sinister.



In Arcadia: S.T.A.L.K.E.R., Corrado Morgana and Angus Carlyle, 2007  
Still from video

Originated within S.T.A.L.K.E.R. :Shadow of Chernobyl developed by GSC Gameworld published by THQ, 2007

What follows is an anecdotal description of my experiences capturing the source material. This was written initially as an email/mail list post. It is interesting to note that what defined many of the captures were original savegames that were generated during playing the game as intended. These savegames, for those not familiar with the

concept, define and bookmark a player's position within the gameworld both spatially and temporally allowing players to take a break and return to the game later or save their position before particularly difficult sections. These add an interesting element as they are taken from their original context and that those prior negotiations as a gamer, before intending to produce an artwork with the game engine, also impose their own parameters on the photographer/artist.

So...

I loaded up an old savegame, my location, near the small valley where the original capture was taken. I lined up my viewpoint but it started raining and because I was looking for a clear weather twilight shot I waited for the rain to clear...and waited...and waited. Eventually, at least half an hour realtime, a cup of tea and other banalities, later (a day in STALKER lasts around 2 hours ) the weather cleared up. Great, get the 'camera' out...the beasties came back! A pack of mutant dogs invaded the valley and did what mutant beasties do best...ran around howling, barking and drooling, spoiling my shot.

So, I got out my twelve gauge and filled them full of the former Soviet republics hottest lead. However one of the beastie dog corpses landed right, smack bang in front of the camera with no way to move it as in other games like Splinter Cell (there are no in-game incentives to hide corpses, animal or otherwise, so this is not modelled). Bollocks...ah well, it'll get dark soon, the shot will match the original and it'll just look like a log or something. It got dark...it looked like an unsightly blob and another bloody beastie turned up. BUT WAIT: I uncocked my 12 gauge, the beastie was dragging his digital fallen comrade behind a bush, out of shot. I did the decent thing and culled the vermin....I turned off my onscreen crosshairs and weapon and got my first capture.

Later, the weather started to get interesting, a midnight storm with thunder and lightning offered some good capture material that we had not initially decided to use but I thought it might be applicable. However, the game engine let me down. The large tree in the foreground's 'shadow decided to appear several feet away from the tree itself. It wasn't attached to the tree like Peter Pan's lost shadow. AAAAARRRRRGGGGHH!!! Cropping the shot would help but would lose a lot of image detail due to having to zoom in on the footage and my carefully composed scene wouldn't be quite the same. The off-centre shadow-detached tree would have to be excised in the final crop and edit. I captured a few 3 minute takes with the errant shadow in shot.

I did manage to get a few other captures without the offending tree but the in-game 'anomalies' are clearly visible in the distance. I couldn't do anything about them. There seem to be no easy console codes/cheats to remove them and I really didn't have time to learn how to use the STALKER SDK (software development kit) to edit them out, which I guess is actually a little too much interference with the game engine.

Next up...

Location 2

I trawled through my savegames and found one where I was situated in a particularly picturesque locale at nighttime. I positioned myself to get the shot

then saw some torchlight from a bunch of mercenaries out to pop a cap in my proverbial. Even with invulnerability console cheats or trainers, they still shoot at you, tracer flies through the air spoiling the shot. I hid. I thought that I would probably have enough time to get the footage, so I stealthily moved into position only to be ripped to shreds by a pack of mutant wolves...much swearing! This was repeated several times. My savegame had placed me in an extremely difficult position. During normal gameplay I would have headed out of the danger zone into another safer area. However that was in the opposite direction to the potential film location.

I could have loaded an earlier savegame, however the gap between saves and the subsequent travel to the location would take over an hour, with no guarantee of an ambush free trip; I couldn't be bothered with the slog. I could also have loaded the map using a console cheat, however the startpoint here is also a considerable distance from the area of outstanding natural beauty I'd found... not enough time; it would probably take me an hour or so to get there again and even on novice difficulty (bravado stopped me from using GOD mode) clearing any of the many packs of, footage spoiling bandits, mercenaries, packs of dogs and other beasts would be too much like hard work. I gave up with this location.

### Location 3

I tried to duplicate another earlier capture of a tranquil mid-afternoon scene with a farmhouse in the distance. The original was marred by some AI activity in the middle distance so I tried again. A bullet whizzed past my head and I was attacked by a pack of bandits. I dropped the difficulty level down to novice (bravado alert...I normally play on Hardcore (liar!)). A heated gun battle followed, peace was restored. I proceeded with the capture, carefully lining myself up so as to get a decent composition. A few in-game anomalies marred the scene. So I repositioned myself so that a few tree branches hid them from site, pressed F1 and captured 4 perfect minutes.

These negotiations discussed are effected particularly by A-Life, which is the developer's name for the dynamic artificial life system which gives creatures, mercenaries, etc motivations and imperatives: seek food, hide, etc. They are also effected by the dynamic weather and day/night cycle, as well as initial activity as a gamer, The savegames, which have their own affordances, were created whilst engaging with the game as a player and not as an artist. Prior knowledge of the levels and maps is also an issue. In defining rules of engagement of 'In Arcadia,' we decided not to overly manipulate the environment, only to allow what would naturally happen.

Significant as another take on location shooting is Spanish machinima maker Hectrol (2007). Hectrol has produced a 60's style bombastic wildlife documentary complete with retro music and comedy dialogue also within S.T.A.L.K.E.R. Entitled 'STALKER: la zona en vivo: la temeraria oveja mutant minera', it uses S.T.A.L.K.E.R.'s A-Life 'beasties' as its subject. The player literally stalks mutant beasts whilst a narrator, presumably the player, gives a Jacques Cousteau-like retelling of events.

Videogame artist John Paul Bichard and myself discussed the notion of working within a videogame as a kind of artist's residency, relating how an artist has to choose a particular game for its affordances (physical modelling properties, visuals, scenario and ease of use amongst other properties) and learn the games narratives, pre-scripted

sequences, etc so as to exploit the game for creative practice. Particularly significant is Bichard's work 'The White Room' (2004), in which he produced high-resolution 'photographic' prints within the Max Payne 2 game engine. These images are of disaster scenarios, shootings, fires and other evidence of aggressive and violent activity within domestic and industrial spaces within the games existing environments.

Bichard utilised various console codes. A console, within a game, is a way of inputting codes which the developers have implemented for testing purposes, or even just for fun. In-game effects range from invulnerability to changing the way graphics are rendered. Sometimes comical, games may have codes to enlarge characters heads and introduce absurdities such as disco lighting. Bichard used console codes such as GOD mode and the allWEAPONS cheats so as to be invulnerable and fully armed whilst negotiating and positioning himself within the games levels. He also used BenDMan'S 'bloody mod 1.2,' which exaggerates the amount of gore produced when shooting the in-game adversaries. A mod is a modification of a game engine, usually available online as a downloadable and installable file which alters certain game parameters or provides additional content. Bichard played through the game several times to learn its potentials and later returned to appropriate rooms or areas, shooting at in-game adversaries until the scene is optimal for a screenshot. He tells of how adversaries' corpses were fired at until they were blasted out of the shot - a somewhat unpleasant experience. This is impossible in S.T.A.L.K.E.R as physically moving bodies is not modelled, however a mod similar to BenDMans may exist. There are many similarities to 'In Arcadia'; the photoshoot, however, is far more orchestrated and orchestrate-able. Bichard has more personal control over the parameters/scenography of the shot although the process of actively searching for an appropriate location within a gameworld is similar. The set of affordances of 'In Arcadia' governing the artist's agency is contingent upon S.T.A.L.K.E.R's A-LIFE (artificial life) engine and its dynamic weather generator to produce unpredictable, relatively realistic emergent negotiations as well as the more predictable day/night cycles. In Max Payne 2, on the other hand, most engagements are relatively predictable: there is always a set amount of enemies in an area; the weather is consistent and invariant from the level designer's original intention (non-dynamic); when enemies are cleared out of a level or area no more are generated, even though they have their own autonomous task based AI behaviour (usually to kill Max Payne, the player character, and take cover when necessary). Also, no patrolling mercenaries or packs of mutant dogs will unexpectedly turn up to sometimes attack each other or the lurking S.T.A.L.K.E.R player.



The White Room,  
John Paul Bichard 2004, photographic print

Image copyright © John Paul Bichard 2004.

Image originated within the developer version of Max Payne 2 running the standard game maps. Max Payne is a trademark of Rockstar Games /Take Two Interactive. Max Payne 2 is copyright © Rockstar Games 2003

The learning of the game and the tacit knowledge necessary to engage with the game itself parallels Lowood's (2007) notion of high performance play. He references early machinima authors, primarily using Quake, who were not only great game players but also great coders, producing their own tools that allowed the production of their machinima. Early works by Clan Undead, a gaming clan, were concerned with producing characterful and comedic theatrics that expanded on earlier machinima that only documented actual gameplay. They would stage scenarios where each participant had a scripted narrative, theatrical role.

“[They proved that]...theatrical play in quake movies need not be wholly bound to gameplay, that a suite of performance gestures could be more closely mapped to narrative and character. This freedom of theatrical performance could not be achieved, however, without programming prowess and playing skills”

(Lowood, 2007)

These early examples did not only present mastery of the game and its environments but also mastery and innate understanding of the very code of the game itself. The footage from 'In Arcadia' is as found but re-edited in traditional, albeit digital, environments like Premiere and Final Cut Pro. Early machinima remained 'software' for most of its life as an artefact, viewable as demos, a code-based recording that runs within the game engine rather than a digital video document. This has real advantages as in-game cameras can be repositioned after the actual recording has taken place to viewpoints other than that of the player's first person view. 'In Arcadia' does not reposition its camera after the initial performativity. It holds a more traditional relationship with

moving image albeit as a particular branch of machinima but still requires a significant level of high performance play in its production.

## Post-Game Narratives

“Give the users something to talk about over lunch, be it the giant creature that chased their squad or the online match they single-handedly won. Pace the experience properly and thrill the gamers accordingly”

CliffyB...Gears of War manual

In the writing of this paper, particularly the anecdote about my travels within the Zone, what became evident is the significance of post-game narratives both as a descriptive and reflexive tool and as a form of storytelling/creative practice in itself.

Henry Jenkins (2004) discusses narrative in games and introduces the term player-generated narratives. He discusses the importance of fostering such narratives. These narratives are more evident in particular game types such as sandbox games and simulators; games where player agency is more important than pre-scripted narrative. The narratives that a player produces are dependant on the player's actions and not solely on scripted scenarios. Player-generated narratives should not be confused with the narratives that are used as plot development and scenario with little player agency; they are, however, inextricably linked. Post-game narratives are the actual artefacts themselves: texts, video documents produced through performativity, a conflux of scenario and engagement with that scenario. Player-generated narratives exist within the gameworld and produce post-game narratives, which exist outside the game. These post-game narratives should also not be confused with fan fiction as they are not fictions.

My use of the term performative may need some clarification. Bogost (2008) discusses the notion of the performative within games as that which is performed within the game but instantiates something that is outside the game -based on J.L. Austin's performative utterance. He discusses fitness games, videogame artworks that intentionally affect the player physically and ARG's (alternate reality games). My view is that intentionality must influence the performative. If a gamer or producer intends to use the artefact outside of the normative game then that must be performative in Bogost's notion as the intention is to instantiate something that is part of 'real-world' discourse outside of the game. Of note is Juul's (2005) concept of games being Half-real: we play by a set of rules which affect us as consenting individuals but the scenarios or milieu are fictions which we as real, though embodied through avatars and player characters, inhabit. Sommerseth (2007) also discusses this through the notion that 'realism [and arguably non realistic representation] is dependent on the player's embodied experience of play [and other activity] as opposed to mimetic representation'. I would argue that because of this embodiment games are more than half-real and the performative act/performativity can exist entirely within the gameworld.

The anecdotal text and its particular stylistic presentation has parallels with New Games Journalism. Coined by Keiron Gillen (2004) and based on Tom Wolfe's collection of articles on 'the new journalism,' It is a form of journalism which is personal, resonant and intelligent - a counterpoint to much videogames journalism, which, at the time, was obsessed with scores out of a 100, technical details, and cookie cutter reviews. New

Games Journalism has more in common with Hunter S. Thompson's 'gonzoid' style adapted to videogames. Gillen describes how much cliché and repetition has been occurring in much of the writing, although this is changing. Gillen promotes the dogma of New Games Journalism as:

- 1) The worth of gaming lies in the gamer not the game.
- 2) Write travel journalism to Imaginary places.

Some notable examples...

Always\_Black's (2004) text 'Bow Nigger' describes a particularly racist encounter within Jedi Knight 2: Jedi Outcast multiplayer and Nightfreeze's 'The Great Scam' (2004) describes social engineering within Eve Online. Axel Stockburger (2005) in his videowork 'Boys in the Hood' presents several monologues of young male's activities within Grand Theft Auto as a video documentary of such activity.

What these have in common is that they are experiential retellings of actual events. These function as documentary from a nuanced point of view.

Outside of the more journalistic, documentary video/art practices, post-game narratives are prevalent in online forums. In World War II submarine simulator series Silent Hunter, the basic goal is to destroy Allied or Japanese shipping. Avoiding destroyers, aerial attacks, crew management, and other simulated hazards create highly variant and unpredictable gaming leading to a potentially very rich player generated narrative. On Silent Hunter forums, many players have written narratives based on their experiences (Relcox, 2007 and 2008, SubQual, 2005). The writing style varies from simple descriptions of events acknowledging the mechanisms of the game, as in my 'In Arcadia' anecdote whilst others have been crafted into well written and intelligent documents based around their own simulated 'war diaries'. The Silent Hunter 3 forums' 10,000k club (WilhelmSchulz, 2006) 'honours' gamers who have sunk more than 10,000 tonnes of allied shipping with associated tales of captains' escapades, for instance. The fact that these texts are based on virtual in-game experience distinguishes them from fan fiction. Retellings of simulated events must function as realities, as documents of some form of activity. It is only the stylistic re-framing that makes the accounts seem so. In the forums there are both post-game narratives presented as well as fan fiction. There are many references to real life U-boat commander Herbert A Werner (1969) and his first-hand account 'Iron Coffins'. Indeed, many of these documents ape his literary style.

It is crucial to understand how these documents function and what exactly the role of these narratives is. Post-Game Narratives foster more depth of engagement between other players and producers. They are narratives that give more value to in-game actions, demystifying certain map areas or mythologising player activity. They are texts which arguably describe activity and performativity in a far more accessible and evocative manner than more technical, academic and less journalistic texts. The anecdotal nature is perfectly suited to critical analysis and as a starting point for more detailed descriptions, mappings, and interpretations. Indeed, this text in itself, with its document of performativity and also the surrounding dialogues and concurrent practices, is a prime example of their application.

## References

always\_black (2004), *Bow Nigger* in in " *The Game Design Reader*" edited by Salen, K, Zimmerman, E. London:MIT Press, 2006

Bichard, J. P, *The White Room*, (online), 2004,  
[http://www.ideal-milk.com/project/evidencia/evidencia\\_02.htm](http://www.ideal-milk.com/project/evidencia/evidencia_02.htm) [accessed] 10/01/08

Bogost, I., *Persuasive Games Performative Play*, (online), 2008  
[http://www.gamasutra.com/view/feature/3703/persuasive\\_games\\_performative\\_play.php](http://www.gamasutra.com/view/feature/3703/persuasive_games_performative_play.php) [accessed 30/06/08]

CliffyB a.k.a. Bleszinski, Clifford, *Gears of War manual*, Epic Games and Microsoft Game Studios, 2008

Gillen, K., *The New Games Journalism*, Keiron Gillens Workblog, (online) 2004,  
[http://gillen.cream.org/wordpress\\_html/?page\\_id=3](http://gillen.cream.org/wordpress_html/?page_id=3) [accessed] 03/07/08

Hectrol, *STALKER: la zona en vivo: la temeraria oveja mutant minera* (online) 2007,  
[www.youtube.com/watch?v=Ft4-YaprXpQ](http://www.youtube.com/watch?v=Ft4-YaprXpQ) [accessed] 19/04/08

Herbert A. Werner (1969), *Iron Coffins: A U-Boat Commander's War, 1939-45*, London: Cassell Military paperbacks, 2004

Jenkins, H., *Game Design as Narrative Architecture*, 2004 in Mitchell and Clarke (eds) (2007) "Videogames and Art", Bristol: Intellect Books, 2007

Juul, J., *Half--Real: Video Games Between Real Rules and Fictional Worlds*, London:MIT Press, 2005

Bichard J.P., *The White Room*, 2004

Lowood, H, *High Performance Play: The Making of Machinima*, 2007 in Mitchell and Clarke (eds) "Videogames and Art", Bristol: Intellect Books, 2007

Morgana C. and Carlyle A, *In Arcadia: S.T.A.L.K.E.R.*, 2007 (online version)  
<http://gamecritical.net/modules/wiwimod/index.php?page=InArc&back=Projects>  
[accessed 17/11/2008]

Nightfreeze, *The Great Scam* (online)2004  
<http://www.wirm.net/nightfreeze/part1.html> [accessed 20/02/08]

Relcox *Absolutely Thrilled* (online forum post), 2007  
<http://forums.ubi.com/eve/forums/a/tpc/f/857101043/m/7091067756> [accessed 14/04/08]

Relcox, *Straight out of 'Das Boot'* (Online forum post), 2007  
<http://forums.ubi.com/eve/forums/a/tpc/f/857101043/m/9641038756> [accessed 14/04/08]

Schwartz, D.L & Okita, S, *The Productive Agency in Learning by Teaching*, School of Education, Stanford University, 2006

Sommerseth, H., Gamic Realism: Player Perception and Action in Video Game Play. In DIGRA; Situated Play Proceedings, 2007 (online)  
<http://www.digra.org/dl/db/07311.57232.pdf> [accessed 21/04/08]

Stockburger, A, Boys in the Hood, 2005

Strugatsky, Arkady and Boris (1971). *Roadside Picnic (SF Collector's Edition)*. London: Gollancz, 2000

SubQual, *U-1 On Patrol* (online forum post), 2005

<http://forums.ubi.com/eve/forums/a/tpc/f/857101043/m/8641052303?r=4611004303#4611004303> [accessed 14/04/08]

WilhelmSchulz. 10,00k club (online forum post), 2007

<http://forums.ubi.com/eve/forums/a/tpc/f/857101043/m/9191010914> [accessed 14/04/08]

## Games

Battlefield 2 developed by DICE published by EA games, 2005

Battlefield 2: Special Forces developed by DICE published by EA games, 2005

Call of Duty 2 developed by Infinity Ward, published by Activision, 2005

Eve Online developed by CCP productions, published by Simon and Schuster Interactive, 2003

Max Payne 2 developed by Remedy published by Rockstar, 2003

Oblivion developed by Bethesda game studios published by [Bethesda Softworks/ZeniMax Media](#) and [2K Games](#), 2006

S.T.A.L.K.E.R. :Shadow of Chernobyl developed by GSC Gameworld published by THQ, 2007

Star Wars Jedi Knight II: Jedi Outcast developed by Raven software published by Lucasarts and Activision, 2002