Cut-scenes

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Abstract

The essay discusses the role and function of cinematic cut-scenes in single-player games, in particular with respect to ongoing debates over in-game vs. cinematic storytelling. The first part gives an account of key historical developments and main current trends. The second part gives an introduction to the notion of narrative framing, emphasizing in particular the relevance of a rhetorical perspective. The third part argues that cut-scenes set up a separate cinematic space in parallel to ordinary game space, which redefines rather than necessarily excludes player agency. The final note suggests that successful storytelling through cut-scenes is rooted in a mirroring relationship between the player's experience and the characters' story.

The meta-question on narrative is, are we going toward this parallel model, which is "game, cutscene, game, cutscene, game"? Because it's a bit odd, if you think about it. It's an artifact from when our world was simple (...) The question I'm asking more is what excites me as a game developer? Exploring this space, or exploring the parallel space? The answer may be for any particular game developer, the parallel space. And God bless them. Go forth and prosper. I think, though, that games are uniquely their own media. It's about exploring the integrated space.

Ken Levine to Gamasutra (Kumar & Nutt, 2008).

Cut-scenes have become very much part of what defines single-player gaming as we know it, featuring prominently in leading series during the last 10 years like *Tomb Raider* (Core Design/Crystal Dynamics, 1996-present) *Halo* (Bungie, 2001-present) *Grand Theft Auto III-IV* (Rockstar North, 2001-2012)*Uncharted* (Naughty Dogs, 2007-present), or *Mass Effect* (Bioware, 2007-2012). A cut-scene is a cinematic sequence that suspends regular gameplay in order to convey plot, characterization, and spectacle. In broad gameplay terms, cut-scenes contribute to structure and pacing in story-based single-player games. They typically function as rewards for the player, as markers of progress along the way, and as regular respites from the intensity of action. As pointed out by Hanckock (2002), Klevjer (2002), and Salen & Zimmermann (2004), cut-scenes may also have more specific gameplay functions, often providing information to the player about upcoming events and challenges, or catapulting the player into the thick of the action.

The video game industry, as well as game journalism and academic video game studies, has an ambivalent relationship to cut-scenes. The quote above from Ken Levine, a much-cited industry authority on how to do storytelling in games, illustrates a common critical view, which asserts that storytelling should happen within the gameworld itself rather than being added to it through film sequences. Notable examples of this design principle in recent video game history would be the *Half-Life* series, the *Call of Duty* single-player games, and Levine's own *Bioshock* games.

Drawing on previous research as well as considering some notable recent developments, this essay will discuss the role of cut-scenes in games. What are their defining characteristics and key functions? What is the significant difference, if there is any, between storytelling through cut-scenes and storytelling through in-game events? Let me first give a

brief introduction to the historical origins and the basic forms and functions of cinematic cutscenes as a storytelling device.

History and Functions

Pac-Man (Namco, 1980) was the first game to include cut-scenes in the literal sense of the term: brief non-playable intermissions that "cut" away from the action to present a kind of staged "scene" depicting Pac-Man and his monsters chasing each other around. The animated intermissions in *Donkey Kong* (Nintendo, 1981) were the first to unambiguously convey a story and a plot: Kong steals the princess and Jumpman saves her.Cut-scenes continued to play only a relatively modest role in action games during the 1980s. *Super Mario Bros*. (Nintendo, 1985), which merged adventure and platform-action into a sub-genre of its own and established Nintendo as the new king of the video game industry, did not have cut-scenes, and the cartridge ROM for the Nintendo home console system did not have much space for extravagant content anyway. Animated cut-scenes were occasionally being used in role-playing and adventure games, but the main storytelling devices were still static text and dialogues scenes.

In the early 1990s, the situation changed in two important ways. First, the introduction of the CD-ROM, especially the way in which it came to dominate the console market through Sony's PlayStation, dramatically expanded the storage space available for video, music, and voice. It set a new standard for what players expected in terms of media content and production values in games. *Final Fantasy VII* (Square, 1997), was particularly influential in raising the bar in this respect. Its pre-rendered cut-scenes, referred to as full-motion video (FMV), were lavishly produced, cinematic-looking and spectacular, and resonated well with the semi-3D graphics of the rest of the game.

Like the *Metal Gear Solid* series (Konami, 1998-present), the *Final Fantasy* games after *Final Fantasy VII* (Square, 1997-present) have made numerous cut-scenes and non-playable dialogue their trademark, in effect creating a kind of hybrid hypertext-game format that has a large and devoted following.

The enlarged storage space that was made available also spurred new experiments in hybrid film-game formats. *Wing Commander IV* (Origin, 1996) and *Command and Conquer: Red Alert* (Westwood, 1996) had large amounts of live-action cutscenes, but in the subsequent years few games followed their lead. Hypertext-adventures with live-action cinematics, like *Phantasmagoria* (Sierra On-Line, 1995), *The 7th Guest* (Trilobyte, 1993) and *Johnny Mnemonic* (cineACTIVE, 1995), also blossomed during this relatively brief period. However, their style of puzzle-based interactive cinema was not a commercial success, and the interactive movie game genre (Perron, 2007) all but died out. In recent years, Quantic Dream's *Fahrenheit* (Quantic Dream, 2005) and *Heavy Rain* (2010) can be seen as a rebirth of this rather peculiar genre of single-player gaming. However, this time around they are building their worlds through real-time graphics, which is far more malleable than canned video footage. Crucially, this also allows for avatar-based 3-D navigation, which in marketing terms has become an absolute prerequisite for any contemporary big-budget console title.

Real-time 3-D navigation was indeed the second big change for cut-scenes in the early-to-mid-1990s, driven by the emerging first-person shooter (FPS) genre. The entire range of action-adventure genres, including Nintendo's own *Super Mario* series (Nintendo, 1985-present) and *Legend of Zelda* series (Nintendo, 1993-present), were re-crafted within real-time navigable 3-D polygonal space. The moving frames of side-scrollers, top-down and isometric scrollers gave way to a navigable virtual camera as the player's central mode of access to game space. Hence, game space became much more similar to film space, revitalizing old dreams of Virtual Reality and interactive Hollywood cinema (Nitsche, 2008). Cut-scenes

could now be played out in real time, rendered through the games' own graphics engines, and blended seamlessly with the polygonal graphics of gameplay. The invention of scripted realtime polygonal animation also gave birth to what became known as *Machinima*, the production of animated films through in game-based real-time environments.

The Nintendo 64 console (codenamed "Project Reality" while in development) could do very little full-motion video, due to the ROM cartridges' lack of storage space. However, it was well-suited to real-time cut-scenes. Taking *The Legend of Zelda* series into 3-D space, *Ocarina of Time* (Nintendo, 1998) demonstrated how in-engine cinematics could be used very effectively, not just conveying the plot but also as a way of rewarding the player with scenes of great atmosphere and spectacle, not least by introducing a host of beautiful and terrifying bosses, and depicting each one's majestic downfall when the player had beaten them.

Around the turn of the millennium, real-time (yet fully voiced) cinematics started to become the default choice in games across the board. *Grand Theft Auto III*, effectively laying the groundwork for a new sub-genre of open-world action-adventure gaming, was especially important in this respect. Through writing, directing, and acting at a level of quality that was hitherto almost unheard of in the game industry, and with a keen eye to the particular sensibilities of their chosen genre of fiction, the game's real-time cut-scenes significantly helped define the Liberty City world. Like the earlier *Perfect Dark* (Rare, 2000) which was also notable for its high-quality voiced cut-scenes, *GTA III*'s cinematic sequences were particularly used as mission briefings and de-briefings, framing each mission firmly in Hollywood's gangster mythology. At the same time there were still notable examples of FMV in this period. The cut-scenes in *Silent Hill 2* (Team Silent, 2001) arguably have a poetic and emotional intensity that could hardly have been achieved through the available technology of real-time animation at the time.

Today, nearly all cut-scenes are generated in-game, as it costs less and is far more flexible than pre-rendered video, and also because most game developers favor a visual seamlessness between gameplay sections and the cinematics. In terms of sheer visual quality, the advanced capabilities of contemporary gaming hardware mean that there is less to be gained from using state-of-the-art pre-rendered video. During the first years of the 7th generation of home consoles, there was a marked improvement in the cinematic and artistic quality of cut-scenes in typical triple-A single-player titles, as was apparent in major titles like Mass Effect (Bioware, 2007) and Uncharted (Naughty Dog, 2007). In these and subsequent blockbuster releases, continuing advances in technologies of performance capture and facial animation meant that the acting in these games could be as nuanced as that of feature films. A particular point in case is the advanced "motion scan" technique employed by the recent L.A. Noire (Team Bondi, 2011), a game that relies on the subtleties of facial expression as a core part of its gameplay. The Uncharted series and L.A. Noire also illustrate how games can more easily take advantage of the flexibility of real-time cinematics, by continually interspersing gameplay with micro-cut-scenes that briefly take control out of the player's hands. These can be very simple – like when for example, in the opening sequence of Uncharted 2 (Naughty Dog, 2009), the playable character stumbles only so slightly before he (and the player) regains control.

Efforts to make cinematic sequences playable or "interactive" in various ways has been a consistent tendency during the last 10 years or so. So-called "quick time events", during which the player must respond quickly to on-screen button prompts in order to make the scene unfold in a certain way, has seen a renaissance following popular action-adventures like *Resident Evil 4* (Capcom, 2005) and *God of War* (SCE Studio Santa Monica, 2005). The playable real-time cinematics of *Fahrenheit* and *Heavy Rain* can also be seen as a part of this larger trend.Finally, Bioware's epic *Mass Effect* blockbuster action-RPG series is a notable

development in the use of playable cinematic sequences. The *Mass Effect* games combine interactive cut-scenes with traditional dialogue tree mechanics to construct plotlines and character relationships that are configurable within a conditional branching structure, hinged around a fixed overarching storyline. Each cut-scene is composed of fixed and variable modular segments, and the different possible variants of any given cut-scene – based on the player's choices – lead to larger or smaller variations in plotline and character relationships. Some of the consequences of such player choice carry over between games, especially between the second and third game in the trilogy.

The *Mass Effect* series is a distinct hybrid of role-playing and interactive cinema, and is significantly more ambitious (and costly) than earlier efforts in the same direction, including Bioware's own *Knights of the Old Republic* (2003), released only four years previously. Improved facial animation technologies have been an important factor, as the majority of the cut-scenes are fairly static dialogue scenes which depend on a certain level of expressive nuance. Key to their success is the consistent use of a characteristically flat acting style, reminiscent of what you would find in plot-driven suspense series like *24* (Fox, 2001-2010) or *Lost* (ABC, 2004-2010). This style means, crucially, that the same individual scene module – for example, a dialogue reaction from Shepard, the male protagonist– can be used in different modular configurations, expressing a different meaning each time, depending on the context of the scene as a whole. This trick, utilizing what in film is known as the Kuleshov effect, is essential to the modular configurability of each cut-scene as well as to the overall malleability of character traits and relationships.

Narrative Framing

The central concern in research focusing on cut-scenes in games – either solely or as part of a broader focus – has been what we may call the question of narrative framing. This

question addresses the various ways in which narration in games – including not just cutscenes but also other mechanisms and devices of traditional narration like written backstory or dialogues scenes – provides "...a fictional framework for you as a player to place yourself within" (Kirksæther, 1998). In a general sense, this kind of framing is the default function of narration in computer games, and cut-scenes are the default way of doing it. In this respect, the function of cut-scenes extends from the framing of the game as a commercial product, which typically situates the game in the context of a cross-media franchise or otherwise established genre fiction, like the Harry Potter series or the Hollywood gangster film genre.

The way in which traditional narrative exposition contributes to situating the player's actions and experiences in a fictional context has been conceptualized in different ways. In Henry Jenkins's influential accounts of *spatial storytelling* in computer games (Fuller & Jenkins, 1995; Jenkins, 2004), the key function of any pre-written exposition, cut-scenes included, is to support the narrative meanings and resonances that are being evoked by the designed space of the game. Computer games, Jenkins says, is a spatial medium, and it is through combating and exploring the environment itself – and ultimately conquering it – that the player gets to engage with a storyworld. Because this storyworld typically will be of the *transmedial* kind, either in the specific sense (like *Star Wars*) or in the more general sense as a piece of genre fiction, the chance to explore and immerse oneself in a familiar fictional world is more important than the specifics of the plot.

However, though Jenkins recognizes the need for traditional narrative exposition in games, in a supporting role, he does not think that cinematic cut-scenes have much of a role to play. On the contrary, echoing Levine and others from ten years later, Jenkins argues that because they are non-playable and "static" film clips imported into game space, using cut-scenes to convey plot is a sign of artistic immaturity, and that they eventually should – and will – be superseded by storytelling techniques that are more integral to the medium.

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Paul Cheng, in his discussion of the nature of cut-scenes (2007)which broadly shares Jenkins's perspective on spatial storytelling, draws the opposite conclusion: the formal tension and seemingly crass hybridity of cut-scene-based gaming, rather than being artistically immature, has been developed into language of its own, with its own rules and conventions, and has become central to inscribing game experiences into broader transmedial narrative contexts. Drawing on the classic work of Marsha Kinder (1991), Cheng points out that hybrid and multimodal interpretative competency is one of the central marks of transmedial popular culture. This idea that the interplay between cut-scenes and game-playing has a language of its own, and should be seen as a distinct mode of expression, is also advocated by Matthew Weise (2003). Using famous examples from *Final Fantasy VII* and *Metal Gear Solid 2*, he specifically points to the inevitable *tension* between playing and watching as a unique source of creative expression in video games.

Hybridity and tension, in other words, need not be a bad thing. Like Weise and Cheng, I would argue that cut-scenes contribute to narrative framing in their own *specific* way, that is, not only in terms of their general function as devices of narrative exposition. Although one could say that cut-scenes are overused, and though they are often used in lazy ways, as a convenient way of conveying plot and packaging a spectacle, they nevertheless bring something unique to the messy blend of forms and techniques that makes up computer game language.

As I have argued previously (Klevjer, 2002), and on this point I agree with Jenkins and others, the central role of cut-scenes is not their capacity to convey a plot – although they are undoubtedly a highly flexible and potent instrument in this respect – but to contextualize the events in the game in the familiar tropes and mythologies of genre fiction. While familiar and ready-made storyworlds are indeed being evoked through the style and affordances of the environment itself, as well as through the nature of the challenges presented to the player, cut-

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scenes are able to convey what I have referred to as the familiar *voice* of a genre. In other words, they bring with them, in a way that scripted events and other forms of in-game storytelling cannot, a rhetorical dimension to the gaming experience. Cinematic cut-scenes, when used to their potential, establish a dialogue or conversation between the actions of the player and voice of a narrator. This conversation echoes the relationship between the player and the imagined designer that is so characteristic of the single-player computer game experience (What do they have in store for me next? What is the significance of this object?).

To the extent that the player's actions are being framed by this conversation, we may say that the actions are also enactments, imbued not merely with narrative or dramatic meaning in the general sense, but more specifically with spoken meanings, narrated meanings. Again, the signifying potential of framing by cut-scenes is not primarily on the level of plot, but on the level of genre and the mythological; when I play, I am being addressed as a typical subject in a typical world. My own actions speak to me in a voice that is not mine.

Cinematic Space

The rhetorical perspective, however, does not address the very particular language of *cinematic* narration. Let me suggest, taking a cue from Ken Levine and others, that we look at cut-scenes essentially as pieces of cinema rather than essentially as non-playable sequences, which means that we define the nature of the cut-scene primarily in terms of space rather than in terms of agency or lack of agency. A cinematic cut-scene suspends regular game space and hence regular gameplay. "Regular" space, then, is what Levine calls "integrated space", as opposed to the "parallel space" of cut-scenes. Although Levine is hardly launching himself as a video game ontologist, I would argue that his basic conceptualization is right on the money, even if one might disagree with his conclusions with respect to the role and functions cut-scenes in game design. Cut-scenes bring cinema into the game.

In a cut-scene, the virtual camera is a *movie camera*, setting up time-space according to the conventions of cinematic fiction. The movie camera speaks through a repertoire of expressive movements (tracking, panning, etc.), framings and focal techniques. Most importantly, it operates through cuts in time and space, which typically follow the conventions of continuity editing. The aim of this kind of camera, whether in a movie or in cut-scene, is to enable the viewer to project an imagined space. This projected space is not an environment made up of locations, sets, and actors, but a world – a complete world – of lives and stories. This world is, following Gerard Genette's classical model (1980), a *diegetic* world, which is spoken or more precisely *told*, in the sense that it is projected through narrative discourse, uttered in the elaborate language of cinematic fiction.

So although *Quake* (id Software, 1996), *Tomb Raider*, and *Super Mario* 64 (Nintendo, 1996) took us into what we may call *cinematographic* space in the 1990s – space as constituted through a camera lens –, this space still stands in sharp contrast to the imaginary space of cinematic fiction, which is projected through the ephemeral omnipresence of the movie camera. A player-controlled navigable camera is the movie camera's ontological opposite. Its function is not to narrate an imagined world, but to extend the player's audiovisual apparatus into synthetic space generated in real time (Klevjer, 2012). Whether the camera is directly navigable, as in a so-called "first-person perspective", or merely indirectly navigable via the playable character – or both at the same time –, its defining function is to be an avatar in the true sense of the term, an embodied incarnation, a "camera-body" (Rehak, 2003) which mediates the player's simulated presence in game space. Insofar as there is storytelling going on in this avatar-based space as well, it will also project its own diegetic world, a world of characters and their stories rather than agents and their behaviors. Still, the environment itself, the three-dimensional space of player participation, is definitely not a world projected in imagination – at least no more so than the world outside the game.

What is sometimes called "in-game" storytelling, then, which is a notion that seems to refer more to the game *engine* than to the game structure, are techniques of dramatic orchestration that make events unfold within embodied synthetic space. Such events may be more or less "integrated" in gameplay terms, as in *Bioshock* (2K Australia, 2007), but they may also be staged as purely navigable dramatic scenes that have no particular gameplay function, as exemplified by some of the scripted sequences in the *Half-Life* series (Valve, 1998-present) or *Call of Duty* series (2003-present).

In terms of historical origins, the understanding that I am proposing here implies that the early pioneers like *Donkey Kong* and *Pac-Man* must be seen as common predecessors to what has later bifurcated into cut-scenes and scripted events. Although as a heuristic exercise, it would be tempting to speculate that whereas *Donkey Kong* primarily points towards scripted events and in-game drama, the romantic cut-scenes in *Pac-Man*'s follow-up, *Ms. Pac-Man* (Namco/Midway, 1981), point towards the diegetic space of cinematic fiction.

With respect to the shift to real-time generated cut-scenes, while this did not change the relationship between cinematic space and avatarial space, the new verisimilitude implied by shared virtual cinematography was nevertheless significant. As mentioned above, it implied more flexibility to rapidly jump back and forth between the two spaces, as the cut between them was no longer immediately apparent from the quality of the image itself. This can lead to interesting ambiguities, especially when there is a loss of player control but no apparent independent camera movements to match, as in the stumbling example from *Uncharted 2* above, or, vice versa, when the player still controls the playable marionette but the camera nevertheless moves in independent ways. Variants of the latter principle, which can have quite unsettling effects, can typically be found in horror games, like *Silent Hill* (Team Silent, 1999) or *Eternal Darkness: Sanity's Requiem* (Silicon Knights, 2002).

Companionships

By bringing the language of the movie camera into the game, cut-scenes attempt to evoke not only the mythology and imagery of cinematic fiction but also its characteristic ontology, its flavor and its tone. The in-game approach and the cut-scenes approach are two very different mechanisms of narrative framing, and one cannot be a substitute for the other. A key difference lies in the role and function of characters. By its very definition, diegetic storytelling projects characters as having a complete and autonomous existence, as *persons*, who act independently and intentionally, who have goals and hopes, who have a history, and who express their inner lives.

The aim of the in-game approach to storytelling is to construct characters not primarily by narrating them, but by expressing them through player-controlled marionettes, AI agents, dialogue structures and scripted events – as if the player is actually getting to know them first-hand. The cinematic approach to storytelling, in contrast, allows characters to live in an imaginary world that is separate from the player's experience in virtual space but which unfolds in a mirroring relationship to this experience. If well designed and well told, there will be meaningful and compelling resonances between the player's story and the characters' story, between my drama *here* and their drama *there*. Successful games are able to establish, given enough time and dedication on the part of the player, a dialogue between the journey of characters and the journey of players, a companionship, a bond across the ontological divide, emerging from shared histories and common destinies.

Finally, how can the imaginary world of cinematic narration be made playable? The simple answer is that it cannot, because it is produced in discourse and hence beyond the realm of viewer or reader agency. Still, there is always the possibility to interact on the level of cinematic discourse itself, in other words to tell a different story, choose a different ending, or play around with possible configurations of the plot. So even if, in cut-scenes, characters

and events are out of reach from the player, inaccessible or "off-line", in James Newman's terminology (2002), they can nevertheless be *indirectly* playable in all kinds of ways. An imagined world of characters and events may be narrated in user-malleable and multi-stranded ways, but the chosen paths and configurations will nevertheless be spoken back to the player through the language of cinematic fiction. Enjoying games like the *Mass Effect* series, therefore, where the parallel space of playable cut-scenes is unusually dominant and complex, may not be very different from the enjoyment reported by writers of literary fiction, who find that their own characters start speaking back to them as autonomous persons, going about their own ways.

To conclude: Levine is right, cut-scenes are indeed a parallel space. But bringing cinema into the game is not simply a matter of convenience. Cinematic fiction is a unique form of narrative framing, which has been continuously developing over 30 years of singleplayer gaming, and which expands the scope and depth of artistic expression in games.

References

Cheng, P. (2007). Waiting for Something to Happen: Narratives, Interactivity and Agency and the Video Game Cut-scene. Situated Play: Proceedings of the 2007 Digital Games Research Association Conference. Retrieved December 21, 2012, from http://www.digra.org/dl/display html?chid=07311.24415.pdf Fuller, M., & Jenkins, H. (1995). Nintendo and New World Travel Writing: A Dialogue. In S. Jones (Ed.), Cybersociety: Computer-Mediated Communication and Community. Thousand Oaks: Sage. Genette, G. (1980). Narrative Discourse. Oxford: Basil Blackwell. Hancock, H. (2002). Better Game Design Through Cutscenes. Gamasutra. Retrieved December 21, 2012, from http://www.gamasutra.com/view/feature/3001/better game design through Jenkins, H. (2004). Game Design as Narrative Architecture. In N. Wardrup-Fruin & P. Harrigan (Eds.), First Person. New Media as Story, Performance and Game. Cambridge, Massachusetts: MIT Press. Kinder, M. (1991). Playing with power in movies, television, and video games : from Muppet Babies to Teenage Mutant Ninja Turtles. Berkeley, Calif.: University of California Press. Kirksæther, J. (1998). The Structure of Video Game Narration. Proceedings from Digital Arts and Culture 1998. Retrieved December 21, 2012, from http://cmc.uib.no/dac98/papers/kirksaether.html Klevjer, R. (2002). In Defence of Cutscenes. Computer Games and Digital Cultures Conference Proceedings. Retrieved December 21, 2012, from http://www.digra.org/dl/db/05164.50328.pdf

- Klevjer, R. (2012). Enter the Avatar. The phenomenology of prosthetic telepresence in computer games. In H. Fossheim, T. Mandt Larsen & J. R. Sageng (Eds.), *The Philosophy of Computer Games*. London & New York: Springer.
- Kumar, M., & Nutt, C. (2008). Ken Levine on Bioschock's Narrative Drive. *Gamasutra*. Retrieved December 21, 2012, from Gamasutra website:

http://www.gamasutra.com/view/feature/132037/ken_levine_on_bioshocks_narrative_.php

- Newman, J. (2002). The Myth of the Ergodic Videogame. Some thoughts on player-character relationships in videogames. *Game Studies, 2*(1). Retrieved December 21, 2012, from http://www.gamestudies.org/0102/newman/
- Nitsche, M. (2008). *Video Game Spaces: Image, Play, and Structure in 3D Worlds*. Cambridge MA: MIT Press.
- Perron, B. (2007). Genre Profile: Interactive Movies. In M. J. P. Wolf (Ed.), *The video game explosion : a history from Pong to PlayStation and beyond* (pp. 127-133). Westport: Greenwood Press.
- Rehak, B. (2003). Playing at Being: Psychoanalysis and the Avatar. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 103-127). London: Routledge.
- Salen, K., & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals*. Cambridge, Massachusetts: MIT Press.
- Weise, M. (2003). How Videogames Express Ideas. *Level Up Conference Proceedings: Proceedings of the 2003 Digital Games Research Association Conference*. Retrieved December 21, 2012, from http://www.digra.org/dl/display_html?chid=05150.07598.pdf