Replacing preconceived accounts of digital games with experience of play: When parents went native in GTA IV:

Gareth Schott

University of Waikato School of Arts Hamilton, New Zealand 0064-7-856-2889 g.schott@waikato.co.nz

Jasper van Vught

University of Waikato School of Arts Hamilton, New Zealand 0064-7-856-2889 jasperv@waikato.co.nz

ABSTRACT

Cautionary frameworks continue to dominate evaluations of games within political contexts, obstructing consideration of the specific conditions and experiences offered by particular game texts. This paper challenges this tendency of prior government-instigated research to promote viewpoints that are not textually evaluative or play-derived when reporting on perceptions of games possessed by the public. Instead, it prioritizes Dovey and Kennedy's (2006) argument that 'we cannot have recourse solely to [games] textual characteristics; we have to pay particular attention to the *moment* of its enactment as it is played.' More concretely, this paper describes research sparked by the NZ Classification Office's interest in exploring 'the extent to which the public's perception of causal links between game playing and various social ills' might be 'moderated or even undermined by [knowledge of] how players actually respond to and negotiate their way through the content and characteristics of the medium' (OFLC 2009, 24). Using in both game-play observation and depth interviews, we concluded that the participants' preconceptions of *Grand Theft Auto IV* (Rockstar North, 2008) were drastically reevaluated after experience playing the game, shifting attitudes and beliefs as to how games should be regulated.

Keywords

Game literacy, social mores, classification, parents/guardians, Grand Theft Auto IV

INTRODUCTION

Despite persistent warnings of the 'holding power' games have over children (Turkle 1984, 66) it has long been suggested that it is not necessarily children that determine that they are 'bowling alone' (Putnam 2000) but maybe some parents' insufficient understanding of, and unwillingness to engage with game cultures (Green et al. 1998). In an interesting and anecdotal online discussion threat entitled 'Teaching parents how to

Proceedings of DiGRA 2011 Conference: Think Design Play.

© 2011 Authors & Digital Games Research Association DiGRA. Personal and educational classroom use of this paper is allowed, commercial use requires specific permission from the author.

play videogames,' players' (age unknown) comments included:

My parents hate videogames [but] they only played them like once EVER

I tried to teach my Mum Guitar Hero. I had to go Beginner on Slowest Speed, and even then she missed tons of notes. It's truly pitiful =D

I tried and succeeded. My mom likes Fable 2 and Kirby on DS. She's not very good but she will learn. But my dad will not even touch the controller (http://forums.sarcasticgamer.com/showthread.php?t=15973)

It was estimated that little knowledge of games (as a played activity) might be responsible for the misconstruction of the moral and ethical frameworks governing game worlds. This research therefore sought to examine parents' preconceptions of the game *Grand Theft Auto IV* against experiences of, and reactions to *playing* the game. As Zagal (2009) has already argued and suggested, actions considered unethical in an out-of-game context may be expected or even demanded while playing a game. A good player (of any type of game) may be one who best exploits his opponent's weaknesses or deceives his fellow players most effectively. While the concept of media literacy has attracted much discussion within contemporary education literature, it tends to be less evident in the design of attitudinal research methodologies that are employed to chart public perceptions of entertainment-related technological and economic change. When surveyed, the public will often evaluate games rationally finding their demands immoral or unethical. The current research therefore sought to redress the tendency of legislative oriented research to shy away from engaging directly with games in its research practices by assessing how exactly parents would interpret and engage with the conditions of a particular game.

The NZ Office of Film and Literature Classification (OFLC) has nevertheless shown continued commitment to ascertaining the New Zealand publics' understanding and perceptions of the classification system through research that has observed the degree of knowledge of, and attention given to, the age-restrictions put in place to protect the public good from possible injury. Yet, in a recent research report, entitled Public Perceptions of a Violent Videogame (OFLC 2009), audience research is presented on X-Men Origins: Wolverine (Raven Software) that provides an example of how the importance of the experience on offer by games is misjudged. The 2009 research employed a perceptionanalysis methodology to record participants' comfort levels with audio-visual clips from X-Men Origins: Wolverine, comprised of footage of 1) player-activated game-play and 2) non-interactive cut-scenes. Logic dictates that games are designed to provoke action responses (Drake & Myers 2006, 608-622) from the player that are not permitted when viewing the text solely as a moving-image clip. As a result, participant attitudes and beliefs recorded in this research were neither play-derived nor always textually evaluative. Instead, existing critical frameworks for evaluating games eclipsed the specific conditions and experiences offered by the text under investigation.

A potential implication associated with the rise of new forms of literacy (Gee 2003), is that amongst populations preceding 'digital natives' (Prensky 2009) (less familiar with contemporary games) too much emphasis is being placed on the 'screen' as the major carrier of information being processed from games. It was postulated that should a user/non-user distinction emerge, it should carry forward implications for the way in which games are publicly understood, managed and regulated. The current research thus sought to address the potential shortcoming of the prior research by examining what

might be gained from engaging participants more directly in a structural and textual analysis of the impact and appropriateness of game text by activating and experiencing the text directly through play. Play required participants to act as agents, responding to the conditions of the game environment. A similar request for research of this nature has also emerged from within Game Studies, as researchers such as Oliver and Pelletier (2005) have also argued that there is a paucity of research generally *detailing* game play.

METHODOLOGY

This research employed qualitative methods to address, in depth, the degree of game literacy expressed by a sample of parents. By observing game-play it was also possible to ensure that post-play discussions were based upon witnessed 'performative involvement' with a game. Participants were interviewed both before (on topics that included knowledge of classification and managing and determining the suitability of game content for dependents) and after game play sessions (game-play evaluation). On average the total participation time, including both observed game-play and pre- and postinterview periods, ran between two and three hours per participant. All participants generally played a game for an hour. It was more common than not for the researcher to end the play session than participants. Observation of game-play permitted an examination of how the player's semiotic work on the text (when reading and interpreting it) was taken directly from the resources that are put to use and made available by the text itself. In doing so, it was also possible to assess the level of communicative competency and moving image literacy exhibited by parents that in turn, determine the degree of tolerance they hold for games and/or pleasure they are able to gain from them (Burn & Parker 2001).

While it is useful to survey general perceptions of, and attitudes towards, interactive game texts, large scale self-report methodologies do tend to work to the assumption that research participants already possess a *preformed* set of ideas, thoughts and beliefs (Gubrium & Holstein 2003) that can be extracted by simply asking questions and recording answers (Cicourel 1964). This has the effect of subordinating the interpretive activity of participants solely to the substance of what they report. To counter this, this research sought to assess general viewpoints on, and preconceptions of, the game medium against observed experiences and immediate and spontaneous reactions to gameplay.

In order to record player experiences, participants were observed using a digital video camera for future referencing. The camera was set up to focus on the game player in order to record any striking non-verbal communication of pleasure or disapproval as they played. Indeed, games are often characterized as a 'lean forward' medium (as opposed to the 'lean back' medium of TV) that creates a gestural space in the space around the screen (Kirkpatrick 2009). The discourse on pleasure and enjoyment attached to games has, thus far, offered little acknowledgment of the body in its accounts (Niedenthal 2009), and so this research sought to account for a wider range of responses elicited in response to games. Secondly, we sought to capture any verbal responses, questions or comments made during game-play sessions. During play sessions it was also possible to capture and log the on-screen outcomes of player input, collecting files of game-play.

Participants

Twenty parents participated in the study, seven male, thirteen female. The majority of the small sample was Pakeha (NZ European) (n = 16), but also included Maori and Pacific Islanders (n = 4). In terms of occupation, the sample contained full-time mothers,

individuals in a range of IT-related occupations, a variety of educational roles, rural and farming-related occupations, and positions in the arts. Nine participants identified themselves as game players, with the remaining eleven declaring no experience or interest in games. However, it must be noted that amongst those who did identify themselves as players during recruitment, it later become apparent during the research that the category of 'game player' was being employed rather loosely to describe, in some cases, past experience with games rather than a more current and active interest in games. Indeed, participants' self-categorisation of their relationship with games and game culture meant the research included two participants who possessed roughly similar levels of game experience but identified their standing as game players quite differently. Also, in a number of cases, during observation of gameplay, the game text and the platform on which it was played (Xbox 360) was just as unfamiliar to some game players as it was to non-game players.

Initially, first attempts to recruit failed to produce a single expression of interest. An electronically circulated 'call for participation' was repeated several times before a decision was made to put a different sampling strategy into action. A sampling technique closer to snowball sampling (more typically employed in studies of 'hidden' populations that are difficult to access) was used more effectively to recruit participants (Heckathorn 1997). During the process of acquiring informed consent for participation, it was revealed that a certain reluctance to participate in the research was attributable to parents' apprehension about being judged a 'bad parent' should they acknowledge little knowledge or understanding of the medium whilst still allowing game technology and practices to take place in their home. As one participant stated 'there's a danger it can be seen as an audit'. Indeed, before the aims and purpose of the research could be outlined fully to prospective participants, the principal researcher was often required to accommodate confessional accounts of how sons/daughters were engaging with either unknown or age-restricted material.

Game Text

For this research, all participants engaged with the third-person sand-box, action adventure role play game, *Grand Theft Auto IV* that holds an R18 classification in NZ. The choice of text was determined by the OFLC, but its popularity and notoriety ultimately proved useful to the study, as most participants held preconceptions about the nature of the game experience in advance of their engagement with it. It is important to note that participants were not being asked to assess the game in terms of its appropriateness for their dependents. Instead, participants were asked to evaluate their encounter with the game's mechanics and its game world as a designed-experience that evokes reactions and responses from the player.

In asking participants to engage with *Grand Theft Auto IV*, it was necessary to take into account the 'sand-box' quality of the game which gives players the freedom to explore and engage with the game environment enabling the development of 'personal narratives' and/or experience of the 'designed narrative' present in the back-story of the main character, the immediate situation and the missions. In order to acknowledge both the personal and distinctive nature of participants' experience with the game, and also enable comparisons between participants' experience of more fixed features of the game-text, the play session was structured.

Participants firstly gained experience of the rules of the game and the objects needed to play (that contain special values and have rules attached to them) (Hunicke et al 2004).

'Way points' were set for players to reach firstly on foot and then in a car. This allowed participants to explore the game environment with a predetermined end-goal. Once these simple tasks were completed, participants were asked to play the mission 'Ivan the Not So Terrible,' selected for the moral dilemma it presents. In the non-interactive cut-scene for this particular mission, the player sees his/her protagonist and avatar, Niko, in an encounter with Russian crook Vladimir Glebov. Vlad (as he is better known) informs Niko that a man named Ivan is planning to rob his cousin Roman's taxi firm. Niko is therefore directed to go to Roman's cab office to intercept Ivan and prevent the robbery. The implication here is that Vlad wants Ivan dead, and that he's using Niko to achieve this goal. The game then resumes, and as the player arrives at the cab office Ivan is seen making his getaway. A chase ensues requiring the player to follow the car some distance before Ivan eventually abandons his vehicle and enters a construction site on foot in a further attempt to lose Niko. The chase continues up ladders and across roofs, requiring the player to leap across buildings, until reaching a dead-end. This mission then presents the first life-or-death decision of Grand Theft Auto IV as Ivan, having slipped, is left hanging onto the ledge of a building. The player is prompted to act by a pop-up window that contains reference to action buttons that will allow the player to either kick Ivan off the ledge of the building, or help him up. Should the player help Ivan, the player still receives a 100% completion for the mission as Niko informs Vlad that he will not be seeing Ivan again. Niko also benefits further from saving Ivan as the grateful NPC reappears later on in the game to give Niko an extra mission.

In playing the 'Ivan the Not So Terrible' mission, participants not only applied their new skills, but also witnessed a non-interactive cut-scene that provided them with a feel for the character (Niko), his mannerisms, and his relationship to the individuals he is working for. It also meant that participants experienced the game's dynamics, or run-time behaviour (Hunicke et al 2004). Once the mission was completed, participants were given whatever remaining time there was in the hour-long game playing session to engage in self-directed play without any further directives.

In order to achieve a sufficient degree of play experience and progress within selected games within the timeframe allocated for play, participants were also paired with, and assisted by, an 'expert gamer'. This gave participants an option to hand over the game controller, or turn to another player for advice if unsure or stuck. From the perspective of the research design, this was not considered problematic as collaborative play also allows those without the game controller to operate as a legitimate peripheral participant (Lave & Wenger 1991) commenting and advising on screen-play. The support of play with an 'expert gamer' was considered a necessary condition, given not only the potential inexperience of participants but also the short time available for participants to develop procedural mastery. Indeed, Aarseth (2003) denominates the earliest phase of playing as the 'explorative stage,' quite distinct from the understanding of games derived from total completion, repeated play, or expert play. A second advantage that collaborative play with an expert gamer offered the research, was the access it gave to any discussions around play as it was activated and experienced.

FINDINGS

As already noted, eleven of the participants identified themselves as having no game experience or interest in the medium. Amongst the nine remaining game playing participants there proved to be a small range of game preferences and experiences. The sampling technique did determine that a key means of identifying participants who played games was achieved through approaching the visible communities attached to

online gaming. Therefore, a number of participants almost exclusively possessed experience with MMOGs and MMORPGs. Irrespective of the different levels of engagement with games, participants that played games commonly expressed a belief that they felt well equipped to support and monitor dependents' access to games because of their experiences/exposure to games. However, this belief did not necessarily translate into a clear distinction between the performance and understanding of players and non-players with the game selected for play, as all play occurred on an Xbox 360 console.

As expected, *Grand Theft Auto IV* was most familiar to participants for the controversy it has attracted:

No, I've seen it very briefly, but pretty much everything I know about it, I've read or heard ... the ones that stick out are the sexist nature of the game, so the demoralization of women and the overall kind of criminal activities that go on within the game, they are the ones that stick out (Female participant)

I've not heard good things about it and it is on [partner's] list of "no, never, you are not touching that" as far as [dependent] is concerned...

[Interviewer] What have you heard about it?

[Female Participant] That it can be quite violent if you chose to be. For me, it goes against the values I am trying to install in my children about respecting authority and you don't kill cops and you don't run over prostitutes, you know, there's no respect for life in it, I think, is what I rebel against ... it's a violent game

For participants, whether they had prior game experience or not, or whether they approached *Grand Theft Auto IV* with a declared dislike of what it promotes, all found the game relatively easy and much more enjoyable to play than first anticipated. Through the course of the structured play all participants were able to manipulate their avatar and the environment enough to allow them to experience a sense of agency within the game. However, the video recordings did allow us to observe signs of embarrassment with many participants when first playing, such as reddening of the neck and cheeks, nervous laughter and self-depreciating comments about how little they would be able to achieve. Amongst game players there was also a tendency to discuss the differences between platforms (console and PC) and the impact unfamiliarity with the controllers and interface was having on their performance. Generally once sessions got under way, they were peppered with laughter that indicated enjoyment and fun.

An advantage of using *Grand Theft Auto IV* for this research was the size and scope of the game and the space made available to the player to freely explore. This constitutes a different experience from war or horror games that often contain maze-like structures in order to contain and intensify battle or conflict that, in turn, places pressure on players to accurately execute precise actions and quick movements. When players did progress from walking the streets of Liberty City to driving a car they did inevitably fail to control their vehicles and crashed into street lamps, pedestrians, vehicles and buildings. Rather than making the experience of traversing space frustrating, participants discovered that errors and/or lower abilities within a sand-box game constituted fun, as they responded to the impact and consequences of their actions with laughter (e.g. car bonnets flying off, driving with the engine on fire). In one case a participant was in the process of narrating

how objectionable he felt it was that you could run-over pedestrians in a game, he turned a corner in his car, mounted the pavement and squashed a pedestrian against a wall. At that moment the participant failed to contain his laughter, undermining his rational evaluation of the game with his bodily and non-verbal response.

Game Versus Sim?

Through game-play it was possible to witness examples of a tension felt by participants that was created by the application of real-world logic to engagement with the game that served to contradict the game's narrative. It was common for participants to overlook the gameness of *Grand Theft Auto IV* due to the representational content contained within its ode to urban life, presenting players with a city as well as a game:

Your landscape is realistic, you're dealing with human people, you've got real cars, it's the stuff that we live with everyday as opposed to the ones based on fantasy which you can completely disassociate from (Female participant)

Thompson (2008), in his review of *Grand Theft Auto IV*, stated that developers Rockstar are 'utterly in love with the idea of the American city: the riot of decay and grandeur, the garish commercialism, the violence and beauty, the architectural delights hidden in every corner.' For many participants, the underlying narrative of the game was powerless in the face of the richness of the game environment. Indeed, during the mission 'Ivan the Not So Terrible,' one participant required assistance to reach its climatic moral dilemma as she followed the road code, thus driving too slowly to successfully engage in a car chase. The participant sought to avoid pedestrians and adhere to traffic signals, not realizing that the road traffic in *Grand Theft Auto IV* is designed to run slower than the cars driven by the avatar, thus automatically making the player drive fast. Other participants were quicker to realize that the game was not designed for players to follow the road code:

I actually felt like a bit of a twat stopping at a red light, it didn't feel right.

[Interviewer] Why should you in a game?

[Female Participant] Exactly, why shouldn't you drive up a wall? It's not real

Returning to the participant who drove carefully throughout the mission, it was necessary to help her reach her destination in the car. Having aided the participant in the mission, the participant then negotiated the roof top chase successfully to reach Ivan hanging off the ledge of the building. Without hesitation she kicked the character off the building to his death. She later stated that on the street she was not so clear whether that still constituted the parameters of the game, yet, the roof top scenario was so familiar from film and television, and so removed from everyday life, that she had little hesitation in conforming to the role and expectation in order to murder the character. Indeed, she was the only participant to select the option of killing Ivan. All the other participants nervously helped the character back onto the building. It was common for participants to report later that they expected to be subsequently punished by Ivan for showing kindness. For example:

By not stepping on the guy's hands and helping him up, I was wondering whether I might jeopardise my character, later on. Whether that guy would go "ha ha ha" and push me off, or run off. So I was aware of those sorts of elements of trying to fulfil a role ... I suppose there was an element that you

could see what happened if you went beyond your brief, that was kind of nice (Male participant)

Corroborating Squire's assertion that gamers do wildly different things with the worlds available to them, participants showed a great deal of variety in their approaches to the game. Indeed, the first player to engage with the game failed to leave the apartment that constitutes the start-point and safe-house for the game. As this participant wandered around his virtual cousin's apartment, his proximity to the television prompted a pop-up menu illustrating how to operate the television. The participant subsequently watched the virtual television, in a virtual apartment, without experiencing the virtual city outside, for the full duration of his play session (an approach to play that sparked the implementation of structured play for the remainder of the sample). In doing so, however, that first participant revelled in the ironic, over-the-top nature of *South Park*-esq comic treatments of taboo and culturally sensitive topics (e.g. re-interpretation of American history). Indeed, many of the participants recognised the irony and social satire operating within the game more generally:

I found it quite funny, but I mean everything is just so over-the-top, so how can you possibly take it so seriously (Female participant)

Participants discovered the joys of driving a range of vehicles (sometimes recklessly), with one participant trying motorcycles, a limousine, a construction truck and a fire engine, as well as failed attempts to acquire boats and planes. Some participants also sought to explore the depth of the environment, trying doors and building entrances, seeking out entertainment and food establishments, surfing the net in a cyber-café, and playing pool and arcade games in bars. While one participant found herself unintentionally holding a rifle (from pressing the wrong button), and enjoying the reaction and panic it caused on the city streets (people fleeing, cars abandoned causing traffic jams), on the whole, participants were rarely engaged in violent encounters. Often participants were the victims rather than the perpetrators of violence if they did experience it. Unsuccessful attempts to steal a vehicle in a gang area, or pursuits by police as the result of committing a crime (e.g. carjacking in front of police or failing to stop at a tollbooth), often resulted in the participant's avatar getting killed. In this way, participants experienced the presence of the law and how it was not possible to 'do anything' without consequence as they had first believed.

With the exception of a few participants that opted to complete further missions during their unguided section of the play session, they did not carry or brandish a guns, nor or use them to kill innocent people unconnected to the internal criminal underworld. Participants learnt that within meaningful engagement with the game, violence is contextualised and players are presented with choices in which either avoidance or resistance is possible:

What I haven't spotted until now ... the only other people you deliberately set out to kill are other criminals (Male participant)

Good moral choices actually accrue advantages, which is interesting, as I would have assumed that the opposite would have been true (Male participant)

Finding out the depth and elements that were there, that were not immediate to me with my knowledge of it, but then looking around a street as you do when you come to a city (Male participant)

The play experience illustrated for participants a generational divide in terms of the demands of contemporary media forms and the levels of literacy required to engage with interactive games. This was often posited as a positive outcome of the experience, as it demonstrated to all participants that games are not only different from what they had believed but also require different levels of understanding and engagement in their activation by players:

I think we underestimate the level of awareness that people have when they are gaming in these environments. Even really, really violent ones. They do pick up on subtle ironies (Female participant)

Because it is a multi-layered, multi-path approach (a movie has a beginning and an end, there's one path through it), obviously there are many different paths through it. You could, I suppose, play it and not come across any violence ... quite conceivably (Male participant)

Classified R18

Participants were asked for their opinions as to why *Grand Theft Auto IV* had received an R18 classification. Rather than a failure to interpret the game text and its themes, participants showed uncertainty regarding the reasons for its classification due to a lack of awareness of how assessment behind classification operates (revealed also in the pregame interviews). Given the positivity of the response to the game and the lower levels of violence experienced compared to what participants' anticipated, one participant speculated that the moral reasoning required by the game was perhaps too complex for younger players:

Well I can certainly see how the scenario where you have a choice between where you help someone, there's a moral judgment where the censors could easily decide it's beyond or not suitable for people under 18 to be contemplating ... that would seem to be the basis of it, rather than because it's a splatter as such you know (Male participant)

However, the opposite view was also presented:

It was set in a narrative that was testing our moral boundaries, I like that ... I don't think kids need to be protected from that part of the game. I don't think parents would be concerned with those moral tests that the characters go through (Male participant)

In general, experience of the game served to confound and confuse participants, as it presented a much more tempered and reasonable experience than was anticipated.

CONCLUSION

I wish I had done this ten years ago (Female participant)

The experience playing *Grand Theft Auto IV* prompted a radical re-evaluation of the text and what constitutes an R18 classified game. Experience prompted parents to

acknowledge the sophistication of the game as a potential reason for its R18 classification, as participants discovered the need to be able to comprehend the irony, satire and inter-textual references employed by the game's designers.

A recommendation was made to the OFLC that further thought be given to the way regulators might go about better educating the public and supporting parents in learning about digital games. Many of the structures of the digital immigrant world (e.g. classification) are often incompatible with the needs and demands of young people. It could be argued that one solution might be to change and engage directly with the micropolitics of the home. 'Subtler,' 'less disruptive' approaches could arise from altering individuals to the processes and practices surrounding play within the home. That is, involving the home in a re-configuration of the 'formality-informality span,' addressing the varying 'extent and strictness of the social rituals which bind the behaviour of people' in their dealings with technology and each other (Misztal 2000). Despite the disconnects, frictions and clashes that are especially apparent when it comes to the existing concerns regarding games, parents remain well placed to better support players to develop forms of 'critical' digital literacy, that is 'cultivat[ing] the habit of uncovering and critiquing both [players'] own constructed and contingent experiences and resulting worldviews, particularly those that influence society's relation[s] with technology' (Duffelmeyer 2001).

In using 'play,' the research served to counteract the effects of a research culture that has produced a society that has 'learnt to become 'researchable subjects' and to 'perform' being a citizen by expressing what they see as appropriate opinions (Buckingham & Braggs 2004). Media research has shown us that participants will not necessarily wish to construct themselves as possessing differing attitudes and beliefs from media reinforced social standards. Discussing the media is itself a form of social action that allows people to define themselves and negotiate their relationship with others. This demanded the use of play in order to extract a different kind of performance from participants in which attitudes towards game content could be expressed more spontaneously. In asking participants to play games, the research facilitated the construction of a more layered appreciation of game content, activity and intent amongst NZ's classification officers.

ENDNOTES

¹ This research was completed for, and funded by New Zealand's Office of Film and Literature Classification (OFLC). The project represented the first collaboration between academy and government, in which a Game Studies perspective was employed.

BIBLIOGRAPHY

Aarseth, E. "Playing Research: Methodological Approaches to Game Analysis," in *Proceedings of the Digital Arts and Culture Conference*, Melbourne, Australia, 2003. Buckingham, D. & Bragg, S. *Young People, Sex and the Media: The facts of life?* Palgrave, New York, 2004.

Burn, A. & Parker, D. "Making Your Mark: Digital inscription, animation and a new visual semiotic," in *Education, Communication & Information*, Vol. 1, No. 2 (2001), pp 155-179.

Cicourel, A.V. *Method and Measurement in Sociology*. Free Press, New York, 1964. Dovey, J. & Kennedy, H. *Game Cultures: computer games as new media*. Open University Press, Maidenhead, UK, 2006.

Drake, R. A., & Myers, L. R. "Visual attention, emotion, and action tendency: Feeling active or passive," in *Cognition and Emotion*, Vol. 20, No. 5 (2006), pp. 608-622.

Duffelmeyer, B. "Using Digital Technology to Augment a Critical Literacy Approach to First-Year Composition," in R. Muffoletto (ed.). *Education and Technology: Critical and Reflective Practices*, Hampton Press, Creskill, NJ, 2001.

Gee, J. P. What Video Games Have to Teach us about Learning and Literacy. Palgrave Macmillan, New York, 2003.

Green, B., Ried, J-A. & Bigum, C. "Teaching the Nintendo Generation," in S. Howard (ed.). *Wired Up: The electronic media*, UCL Press, London, 1998.

Gubrium, J. F. & Holstein, J. A. (eds.). *Postmodern Interviewing*, Sage, London, 2003. Heckathorn, D. D. "Respondent Driven Sampling: A new approach to the study of hidden populations," in *Social Problems*, Vol. 44, No. 2 (1997), pp. 174-199.

Hunicke, R., LeBlanc, M., Zubek, R. "MDA: A formal approach to game design and game research," in *Proceedings of the AAAI Workshop on Challenges in Game A.I.*, AAAI Press, Menlo Park, CA, 2004.

Kirkpatrick, G. "Controller, Hand, Screen: Aesthetic form in the computer game," in *Game and Culture*, Vol. 4, No. 2 (2009), pp. 127-143.

Lave, J. & Wenger, E. *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press, Cambridge, 1991.

Misztal, B. A. *Informality: Social theory and contemporary practice*. Routledge, London, 2000.

Niedenthal, S. "What We Talk About When We Talk About Game Aesthetics," in *Breaking New Ground: Innovation in Games, Play, Practice and Theory, Proceedings of DiGRA 2009.* http://www.digra.org/dl/db/09287.17350.pdf.

Office of Film and Literature Classification. *Public Perceptions of a Violent Videogame: X-Men Origins: Wolverine.* OFLC, Wellington, 2009.

Oliver, M. & Pelletier, C. "The Things We Learned on Liberty Island: Designing games to help people become competent game players," *Proceedings of DiGRA 2005 Conference: Changing Views – Worlds in Play.*

Prensky, M. Digital Game-Based Learning. McGraw Hill, New York, 2001.

Putnam, R. Bowling Alone: The Collapse and Revival of American Community. Simon & Schuster, New York, 2000.

Rockstar North (2008). Grand Theft Auto IV. [Xbox 360], Rockstar Games.

Thompson, C. "Grand Theft Auto IV Delivers Deft Satire of Street Life," in *Wired Magazine* (2008).

http://www.wired.com/gaming/gamingreviews/commentary/games/2008/05/ga mesfrontiers 0502. (accessed 14 April 2010).

Turkle, S. *The Second Self: Computers and the human spirit.* Simon and Schuster, New York, 1984.

Zagal, J. P. "Ethically Notable Videogames: Moral Dilemmas and Gameplay," in *Breaking NewGround: Innovation in Games, Play, Practice and Theory, Proceedings of DiGRA 2009.* http://www.digra.org/dl/db/ 09287.13336.pdf.