As a complex and hybrid medium, games are at once a ‘text’ that can be read and an activity that demands that players participate in the construction of its structure. This article seeks to articulate the relationship and interactions between games and their players, with a specific focus on suspense as a type of player involvement. Previous studies lack a description of the specific qualities of game suspense or the participatory aspects that are responsible for triggering the emotion. By examining how the textual and structural characteristics of the game trigger specific types of suspense, this article explores the involvement of a player between the virtual world and the actual configurative act of play, where personal success and failure are at stake.

**KEYWORDS**
configuration, emotional involvement, interpretation, player experience, suspense

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**PLAYER EXPERIENCE: ARTICULATING SUSPENSE AS A CONFIGURATIVE ENCOUNTER**

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This article seeks to articulate a broader theoretical model that aims to account for the core dimensions of player experiences with digital games. The model continues to be developed as it is tested empirically via a mixed methodology located at an intersection between humanities, social sciences and computer sciences. In order to report on the way games function as textual and structural objects that carry cognitive, affective and social implications, several methodologies are being employed concurrently. These include, screen-extracted game-metric data (Marczak et al., 2012), bio-metric storyboards and eye-tracking measures taking during game-play sessions. Following game-play sessions, participants return to be interviewed and complete player commentaries over footage of their game-play. Beyond the lab setting, participants also complete diary entries that capture their accounts of game-play experiences that occur between lab sessions. A core aim of the research project is to present a new model of media ‘usage’ with regards to digital game-playing experience that seeks to inform regulation processes and the classification of games specifically within a New Zealand context. Compared to other countries, like the UK, where responsibility for the classification of games now rests with a Pan European Game Information (PEGI) rating system, New Zealand’s Office of Film and Literature Classification (OFLC) is in the enviable position of still being able to respond to the particular social mores and taste boundaries of its population. Yet, common to all regulatory processes there exists a tendency to apply and retain descriptors used for more linear media (e.g. film) when conveying game content. The experiential or interactive properties of games appear to have achieved only a nominal value within classification processes. Thus, there is a failure to accurately describe, communicate or predict how games are going to be interpreted and configured (both positively and negatively) once they enter society and culture.

The discipline of game studies is testament to the complexity and hybrid nature of the medium. However, despite its many contributions to scholarly knowledge, it has yet to make a significant impact on the social perception and political treatment of games. We put this down to a certain essentialism that was required to pervade game studies’ early focus on the structural characteristics of games. This has meant that the protection of individuals from harmful media content has remained globally counselled by social science ‘media effects theory’. Although this research has produced an abundance of works that argues both for (Anderson, 2004; Anderson and Bushman 2001; Gentile et al. 2004) and against (Ferguson, 2007; 2008) the ‘digital games are poison theorem’, the research paradigm itself has done so without a developed understanding of games either as texts or processes (Kontour, 2009).
Player experience is not easily quantifiable using a behavioural science perspective alone. Without sufficient recourse to the structural properties of game texts, we argue that the relationship and the full nature of the interaction between the player and the text remains unaccounted for in procedures such as classification.

In this article, we focus on just one component of our larger attempt to develop a sound theoretical framework to guide our empirical research into player experience. Drawing on theoretical advances made in game studies, a working model of player experience has been constructed that borrows from fruitful, albeit sometimes normative scholarly debates that cover essential dichotomies such as story versus game (Aarseth, 2004), rules versus fiction (Juul, 2005), simulation versus representation (Frasca, 2003), and interpretation versus configuration (Eskelinen, 2001). Initial attempts to position the medium of digital games among existing media led to the distinctive interactive properties of games being highlighted extensively. Such approaches have therefore served to aid our understanding of the game-play experience considerably. This has led us to propose a working model that focuses on the game-play experience as an activity that falls between interpretative and fiction-generated.

By focusing on suspense, as a specific type of player experience, this article will illustrate how our model serves to distinguish game suspense (that is configurative and game-oriented) from suspense more typically generated from non-fiction, making it hard to experience emotions in response to it in a conventional manner. This is precisely what might make the suspense experience of games distinct from that of film. We argue that the participatory nature of games disturbs the game’s representation, highlighting their unique ability to be interactive, but, to the contrary, limiting interactivity at key points, thereby turning players into helpless spectators like those that watch films. [2004: 31]

By focusing our attention on the gameness of games, we instead choose to emphasize game-play as the formalized interaction of a player with a game system (Salen and Zimmerman, 2004). This involves complex cognitive processes of meaning construction, cognitive task performance and extravnoematic activity (Aarseth, 1997), accompanied with different emotional states that are both effects of and motivators for the perceptual and behavioural activities of the player. Crucially, at the behavioural end of this relationship is the configurative activity of the player. This is where we act on the input both physically (pushing buttons) and mentally (constructing a strategy). While we scan the screen (as when we are watching films) we also perform nontrivial activity (Aarseth, 1997) to control what happens on that screen. Players therefore determine the event sequences that are brought to the screen, whereas a film viewer must construct his fiction from a given set of signs. Additionally, game-playing is an activity where personal success and failure are at stake while films are representations of activities involving others.

In contrast to Frome and Smuts (2004), we question the idea that suspense in games is ensured by an inability to act; rather it is triggered by our ability to act. This is precisely what might make the suspense experience of games distinct from that of film. We argue that the participatory nature of games disturbs the game’s fiction, making it hard to experience emotions in response to it in a conventional manner. The suspense experience in response to a game is potentially therefore a different kind of suspense.

The line of argument we present here is consistent with behavioural accounts of suspense that define suspense as an emotion (or emotion-like state) involving a ‘hope emotion and a fear emotion coupled with the cognitive state of uncertainty’ (Ortony et al., 1988, 131). In accordance with this definition, suspense is experienced in response to events, agents or objects. This means that we assess our relationship with the object and look at how it will affect our goals. Suspense is an emotion that is neither positive nor negative but rather exists in between two other emotions, one of them being positive: hope, and one being negative: fear. Fear and hope are both ‘prospect-based’ emotions. We experience fear when we are displeased about the prospect of an event and we experience hope when we are pleased about it. Thus, the intensity of our fear or hope – and therewith the intensity of our suspense experience – is very much dependent on the desirability or undesirability of the event. It is understood that suspense is not maximized when the uncertainty of the videogames can be most effective in generating suspense not by highlighting their unique ability to be interactive, but, to the contrary, limiting interactivity at key points, thereby turning players into helpless spectators like those that watch films. [2004: 31]

Suspense: Fear, Hope and Uncertainty
We assume that it is suspense that lures players further into games, keeping them interested and excited about the events ahead. The small number of existing accounts of suspense within games (e.g. Frome and Smuts, 2004; Klimmt et al., 2009) have taken the approach of emphasizing the similarity between games and films, arguing that these media both trigger emotions in a similar way. For example, in ‘Helpless spectators’, Frome and Smuts state that:
event outcomes is maximized, but instead, as Zillmann argues, ‘is predominantly created through the suggestion of negative outcomes’ (1996, 202–3).

Game Suspense: Playing for Personal Success

When watching a film, suspense can be experienced in a number of distinct ways that require the percipient to have an emotional attachment either to a character or the events they are watching. When we feel emotionally attached to a character, suspense can first be determined by how much the viewer knows in relation to what the character knows. Sympathetic or vicarious suspense (Smith, 2000) is experienced when we have an epistemic superiority over the character. We, as the viewer, know of a possible danger that the character is in, while the character remains unaware of that danger. On the other hand, when the viewer’s knowledge is experienced in parallel with the character, empathetic suspense is a more likely response. This form of suspense is ‘shared’ with the character as imagined outcomes, implications and consequences occur in sync with a character’s on-screen reasoning and experiences. Extending beyond character involves viewers in a more direct way in represented events (Perkins, 1972). Here we refer to suspense relating to the fear of being startled. This is typically employed within the horror genre, where audiences receive a startle by the sudden appearance of a figure or object. When accompanied by a sharp loud sound, this has the effect of making the viewer jump. Since the event is not entirely unexpected the viewer experiences suspense in anticipation of the startle.

In contrast, the interactive nature of games mitigates and influences the manner in which players experience the types of suspense associated with watching film. For example, sympathetic suspense or what Chatman has termed the ‘tragic irony’ of a character moving closer to his doom (1978, 59) is largely non-existent in game-play since interactivity determines that the character can be diverted from danger through player control. There is no way for the player to possess epistemic superiority over the character because as soon as we know, the character knows (even if, according to the textual clues this seems impossible). This means that sympathetic suspense can only be experienced in non-interactive cut-scenes, moments when we surrender our control over the character.

Second, feeling suspense along with a player-character seems equally problematic since imagining the fiction (or virtuality) of a game as something real and therefore emotionally involving is arguably much more difficult than with film. The reason for this is that games are designed to be played and not watched, and in order to play them, some rules need to be brought to the fore. The signs that highlight these rules and often the rules themselves are very likely to disturb the coherence and consistency of the game’s fiction (Juul, 2005). A scoreboard, a health-bar, a blue arrow showing us where to go, or a text telling us which buttons to push, are all signs that point to the game as a ‘real’-world activity. As Juul explains, the fact that Mario has three lives in Donkey Kong (Nintendo, 1981) helps us in our configurative act of playing but makes no sense at all in relation to the fiction of the game. The incoherent nature of games as fictional accounts, makes it very difficult to equate game experiences to the consistency and presentational truths maintained for believable fictional worlds conveyed in literature, television and film. Progression games may be more adept at presenting coherent fictions than emergent games, but even these games present incoherences (for example, our character dies in battle and is respawned again). The rules then do not create a coherent fiction but let us alter our strategies and tactics to succeed during subsequent attempts.

Even if we were to ignore the incoherences and inconsistencies of the game’s fiction, an empathetic suspense of the type we may experience in response to non-interactive media is still not guaranteed. The game characters that we control are generally flat. They are focused on action, exhibit little or no consciousness and/or exhibit immoral behaviour. Character actions in games are not what Bruner terms ‘subjunctivized’, that is, they are not ‘seen’ through a ‘mood’ to denote an action or state as conceived but are rather seen as ‘fact’ (1986, 26). James Paul Gee (2003) is one game researcher who argues in favour of a process of identity construction in which a character’s identity in a game becomes the identity that the player wants his character to have. Gee argues that players project their own values onto a character in a process called ‘projective identity’. This comprises the merging of a ‘virtual identity’ (the identity of a virtual character in a virtual world) and a ‘real-world identity’ (the player’s own identity). Although this proposal is appealing, controlling what the character does does not necessarily mean the player also projects his way of thinking, feeling and knowing, that is, his consciousness, onto the character. Acting for your character does not necessarily mean thinking for your character. This becomes more apparent when, in accordance with Bruner (1986), a story is considered to be a combination of a landscape of action and a landscape of consciousness. He states that:

Stories must construct two landscapes simultaneously. One is the landscape of action, where the constituents are the arguments of action: agent, intention or goal, situation, instrument, something corresponding to a ‘story grammar’. The other landscape is the landscape of consciousness: what those involved in the action know, think, or feel, or do not know, think, or feel. (ibid., 14)

Although these two ‘landscapes’ are essential to a story, some stories may focus more on the representation of action, whereas other stories focus more on the representation of consciousness. Now, it is safe to say that video games focus primarily on the landscape of action. When we look at the textual clues we
generate on the screen they show only action and consciousness seems to play no part whatsoever. As Juul argues, the interactive structure of games makes it ‘hard to create a game about emotions (or thoughts) because emotions are hard to implement in rules’ (2005, 20). Because we can act, the game focuses on allowing us to perform interesting actions that generally involve moving and manipulating objects. As Ryan (2001a) has argued, it is simply more enjoyable to play the role of the dragon-slaying hero of Russian fairy tales or Harry Potter than it is to play the role of Anna Karenina or Emma Bovary, because their ‘involvement in the plot is not emotional, but rather a matter of exploring a world, solving problems, performing actions, competing against enemies, and above all dealing with interesting objects in a concrete environment’.

It could be that players still imagine a consciousness for the character on their own, or imagine a consciousness triggered by the information in the cut-scenes. However, this seems quite unlikely since games are not just fiction but also physical, procedural activities involving player input, skills and reactions. We are not just engaged in the interpretative act of ‘reading’ a fiction but also in the configurative act of playing a game. In fact, as Eskelinen (2001) has argued, the most important relationship we have with a game is the configurative act. This will lead us to make sense of the perceived and executed actions as part of what Lindley and Sennersten call the ‘competitive, rule constrained form of a game’ (2006, 6). Winning and high scores are outcomes that affect us directly as a player, whereas surviving zombies or saving the princess affect the character. Although the fictional success of the character is generally directly linked to the player’s success, there is still a distinct difference between playing the game to win or playing the game to have our character save his girlfriend. In this latter case, we might imagine our character as someone ‘real’, with whom we can empathize, while in the first case we simply see our character as a ‘vehicle’ to achieve our own goals (Newman, 2002). It is generally speaking the difference between playing with Mario and playing as Mario.

**Competitive Suspense**

We argue that in our desire for personal success we are able to experience the fear of failure together with a desire to succeed. Due to the uncertainty of the game’s outcome we experience a mode of suspense we term *competitive suspense*. In later papers, Frome also acknowledges this way of experiencing emotions in response to games (Frome, 2006, 2007). He terms these emotion types ‘game emotions’ which he describes as ‘emotions of competition, the emotions generated due to winning, losing, accomplishment, and frustration’ (2006, 19). What we consider failure or success can vary and extend beyond the quantifiable outcomes prioritized by the game. Goals will differ per player based upon playing style and degree of investment. For example, the presence of a high score list might encourage players who seek to achieve the best possible score (e.g. Billy Mitchell’s perfect game of Pac-Man achieved in 1999), but the desire to explore (Bartle, 1996) might lead some players to experience success only when they unearth hidden spaces or discover hidden objects, whereas others may instead desire a perfect ‘kill-to-death-ratio’.

The desirability of success and undesirability of failure can be increased by raising what is at stake. For example, arcade games require players to pay for their play sessions, giving failure a financial consequence and finite playing session. In other games it is mainly the time and effort that has been invested to-date that is at stake. A game that does not present the player with many ‘save points’ will subsequently offer more suspense. Games like *New Super Mario Bros. Wii* (Nintendo, 2010) automatically save the game when you pass a specific checkpoint. When the checkpoints are far apart, as is the case in *Tom Clancy’s Splinter Cell* (Ubisoft Montreal, 2002), or when a game does not allow for any in-level saves, as is the case with *Hitman: Blood Money* (Eidos Interactive, 2006), there can be a considerable amount of time and effort at stake as the level nears completion. Multi-player game modes also possess the potential to be more suspenseful because they extend what is at stake beyond time and effort to a winning state and victory over other players sharing the same competitive environment. In these situations we either triumph over the other or become subordinated.

Competitive suspense is therefore a kind of suspense we can experience in response to all games, including the abstract ones. While empathetic suspense may only be experienced by certain types of players in certain types of games (notably role-playing games – RPGs). Again, given our concern with classification and the articulation of player experiences with games, we emphasize the ‘real’-world activity of the game over involvement or immersion in a fiction. We chose to interpret the fiction as a placeholder for the rules by which we play. This does not serve to undermine the fiction completely. A game cannot be played with only rules, we still require signs to delineate and distinguish different rules. For example, while chess can be played with representative Star Wars characters it cannot be played solely with pawns, as this would counteract the representational and material distinction between pieces that distinguish their power and degrees of freedom in relation to movement. Even Checkers includes different signs to help the player create tactics and strategies: black and white squares, black and white pieces, and the piling up of two pieces to create a King (which then adheres to a different rule structure).

**Anticipation of a Startle as Suspense**

Although one might assume that suspense emanating from the anticipation of a startle might require the player to feel emotionally involved in a fictional scene of
events, we argue that games can also trigger this type of suspense without the use of fiction. Even abstract games that provide the game player with complete knowledge of the game state at any given moment are still capable of evoking a startle effect. For example, the pool game Blast Billiards (Mousebreaker Ltd, 2004) requires the player to pot bombs within a particular timeframe. When the player does not make it in time or when he pots the white ball, the bombs go off. The player may indeed feel somewhat startled by the loud bang and the disruptive representation of the blast. Furthermore, because the player is attuned to the time ticking away, suspense is created in relation to the anticipation of the startle. However, after a couple of tries the player will become aware of the exact moment of the startling event, which makes the seemingly unexpected event actively expected and removes the suspense.

It is more common for players to experience a startle suspense in response to games with fictional worlds because the atmosphere that triggers the anticipation is more easily created through fictional clues. This is especially the case in games that portray dark alleys and scary-looking monsters that can jump out at us unexpectedly. Just as with films, this kind of suspense is mainly experienced in response to games in the horror and thriller genre. In horror games like Condemned 2: Bloodshot (Sega, 2008) or Silent Hill (Konami, 1999), for instance, the player has to move his character around a dark/foggy city with all kinds of scary and dangerous monsters on the loose. The atmosphere in this game is highly suspenseful. It is always dark/foggy and the music/soundscape is continuously suspenseful. Because the game is a 3D environment antagonists can appear from all directions.

Game Suspense: Fictional Clues for Real Suspense

It is difficult to deny that the design focus of many modern video games has been on presenting the player with more elaborate and detailed fictional worlds. But aside from games that trigger the occasional startle suspense, game suspense experience is likely to be very different from our experience of film suspense. We argue that games might use fictions to trigger suspense, but our suspense experience cannot be attributed purely to fiction criteria. Fiction is more likely employed to have us anticipate the possibility of failure. Anticipatory precursors for upcoming events can be termed cataphora (Wulff, 1996). Cataphora comprise all of the situations, characters, objects, sounds and genre conventions that enable the player to construct hypotheses about upcoming events. Yet, because our personal success in games is irreversibly linked to on-screen successes, cataphora that are communicated via the fiction of the game may also trigger our competitive suspense.

Flash forwards, for example, may hint towards a future event, but as it is a game it does not exactly present the future event as fact. For example, in Fahrenheit (Atari, 2005), protagonist Lucas has a vision of a police officer knocking on his door and demanding entrance. To avoid getting arrested the player is required to hide the blood-stained clothes and bed sheet that implicate him in a murder. As a result of the vision the player realizes these actions will probably have to be taken quickly because the policeman may not be far away. We are thus in suspense because we start fearing in line with the character that we could get caught (a form of empathetic suspense), which carries the consequence of disruption or end to our play session (competitive suspense). The flash-forward does not present the future event outcome as fixed but leaves room for it to be changed (due to player agency), and thus because it can be changed we can invest effort in changing it.

Enemies are feared for the way they may affect our game state. Stronger enemies are generally more feared than weaker ones. Added to this, we feel more suspense when we encounter a stronger enemy as they pose a greater threat to us. Failure may then also play a significant part in the realization of how dangerous an enemy really is. Having encountered an enemy repeatedly with the result of failure and on-screen death, the player will possess direct experience of how dangerous an enemy is (rather than anticipation generated by secondary sources or interpretation of its representational construction). This is likely to generate suspense for the player preparing to encounter the enemy again. There are other examples of cataphoric elements in a game capable of triggering ‘fear’. Large gaps or canyons may need to be jumped, falling objects may need to be dodged and flames or gusts of ice-cold wind may need to be avoided. Every single object that looks or acts dangerous is thus a potential threat to the player’s success. Games present us with specific play elements that make no sense within the fiction of the game but instead point to the game as a ‘real’-world activity. Because features of a game such as a ticking clock or a map showing the position of enemies disturb the fiction of the game, we will generally not feel involved in the fiction but feel suspense during the uncertainty about our success or failure as a player of the game. These cataphora will thus have us fear personal failure and hope for personal success, rather than hope or fear along with a character.

Even in an abstract game like Tetris (Pazhitnov, 1984) the suspense attached to failure is triggered by the continuing and unstoppable falling blocks from the sky. Although it may perhaps sound ridiculous to say that we fear the Tetris blocks, in a way this is still true. Although we do not fear the blocks ‘an sich’ (just as we do not fear Donkey Kong), we do fear how the Tetris blocks can affect us. Just like other more anthropomorphic characters like Donkey Kong, the Tetris blocks can cause failure, which is an undesirable condition. The falling blocks thus work as cataphoric elements in the sense that they have us anticipate this possibility of failure. It is of course not the case that every new oncoming block triggers new fears, because very soon we realize that the blocks will just keep coming and that all blocks...
‘behave’ according to the same rules. But the falling blocks, as a whole, still help
us hypothesize the two possible outcomes of the game. In the same way as with
anthropomorphic enemies, these objects become more daunting when the chance of
overcoming them gets smaller. Thus, faster falling Tetris blocks are more dangerous
than slowly falling ones; a large gap is more dangerous than a small gap; and
enormous deadly flames and gusts of ice-cold wind are feared more than tiny not so
deadly ones.

Conclusions
In games, our ability to act is framed by rules that are brought to the fore to help us in
our construction of strategies and tactics. The foregrounding of rules often encompasses
incoherences in the fictional world of the game, making emotional involvement in this
fiction very difficult. Furthermore, games generally present characters as an empty shell
to facilitate player agency. It then becomes difficult to care for an empty shell, especially
when the action of a game requires mostly killing and pillaging, gaining points and
progression measured by levels. Rather than enhancing an involvement in the fiction,
the agency of the player fosters a type of suspense that differs from the suspense we
experience in response to non-interactive fictions.

We argue in terms of our larger consideration of the impact of games, that
suspense in response to games is more often a direct competitive suspense that
enshrines the hope for our personal success and the fear of personal failure.
This kind of suspense cannot be combined with an empathetic or sympathetic
suspense due to an emotional involvement in the ‘real’ act of playing. Previous
discussions of suspense are correct in their assertions that game suspense can be
triggered with the addition of a suspenseful narrative framework. Indeed, games
can exploit cinematographic techniques in order to trigger suspense. Yet, we argue
that even though the triggers may be similar in style, the experience will ultimately
be different. We also argue for recognition of the manner in which games can use
their own techniques to trigger suspense. For example, by foregrounding how failure
is determined the rules of a game our attention is diverted away from its fiction
contexts.

The most medium-specific property of games is the ability to intervene. So
while scholars such as Frome and Smuts (2004) have interpreted their experience
of a game like Splinter Cell as particularly suspenseful because of a perceived
helplessness, we offer a different explanation for its articulation. An example of this
would include how this particular game text does not allow for any in-game save
options which means that, especially near the end of a mission, a substantial amount
of time and effort are at stake. This increases the desirability of success and makes
the undesirability of failure very high. Second, games like Splinter Cell are capable
of delaying (e.g. forcing the player to hide) an anticipated event that is crucial to
progress and success. The game does not render the player helpless but forces him
or her into a waiting position. Such tactics are employed to account for the manner
in which, once an event is set in motion, it plays out in real-time with no room for
stylistic or editing techniques to be used to heighten anxiety and slow down the
outcome.

Contrary to common assertions by game studies scholars that game-play is a
different kind of mediated activity compared to other forms of media reception,
media classification systems have a tendency to reinforce the notion of games as
‘experiential equivalents’ to film. This is reflected in how the ‘impact’ of games is
largely articulated as fiction representations that we interpret (not configure) and
comprehend through the use of fiction. The rating process thus characterizes the
audiovisual representation of (violent) content, leaving the role of interactivity and the
way that content is encountered and processed by players under-articulated. In New
Zealand, the Office of Film and Literature Classification (OFLC) is able to exploit
the flexibility written into the 1993 Classification Act that permits weight to be given
to criteria such as ‘dominant effect’, ‘merit’ and ‘purpose’ when classifying games
(OFLC, 2009). What is required is a more nuanced and medium-specific conceptual
language, validated by empirical evidence pertaining to player experiences, to
further justify the embedding and presence of distinctive game-play elements in
classification assessments and descriptions of games.
REFERENCES

AARSETH, E. (1997) Cybertext: Perspectives on Ergodic Literature, London: Johns Hopkins University Press.

AARSETH, E. (2004) ‘Genre trouble: narrativism and the art of simulation’, in N. Wardrip-Fruin and P. Harrigan (eds.) First Person: New Media as Story, Performance and Game, Cambridge, MA: MIT Press.

ANDERSON, C.A. (2004) ‘An update on the effects of playing violent video games’, Journal of Adolescence 27: 113–22.

ANDERSON, C.A. and B.J. Bushman (2001) ‘Effects of violent games on aggressive behaviour, aggressive cognition, aggressive affect, physiological arousal and prosocial behaviour: a meta-analytic review of the scientific literature’, Psychological Science 12: 353–9.

BARTLE, R. (1996) ‘Hearts, clubs, diamonds, spades: players who suit MUDs’, www.mud.co.uk/richard/hcds.htm (accessed August 2012).

BRUNER, J. (1986) Actual Minds, Possible Worlds, Cambridge, MA: Harvard University Press.

CHATMAN, S. (1978) Story and Discourse: Narrative Structure in Fiction and Film, Ithaca, NY: Cornell University Press.

Eidos Interactive (2006) Hitman: Blood Money (IO Interactive), Sony Playstation 2.

ESKELINEN, M. (2001) ‘The gaming situation’, Game Studies 1(1), available at: http://www.gamestudies.org/0101/eskelinen/ (accessed August 2012).

FRASCA, G. (2003) ‘Simulation versus narrative: introduction to ludology’, in J.P. Wolf and B. Perron (eds.) The Video Game Theory Reader, New York: Routledge.

FROME, J. (2006) ‘Representation, reality, and emotions across media’, Film Studies 8: 12–25.

FROME, J. (2007) ‘Eight ways videogames generate emotion’, Situated Play, Proceedings of DiGRA 2007 Conference. Available at: http://www.digra.org/dl/order_by_author?publication=Situated Play (accessed September 2012).

FROME, J. and A. Smuts (2004) ‘Helpless spectators: generating suspense in video games and films’, TEXT Technology: The Journal of Computer Text Processing 1: 13–34.

FERGUSON, C.J. (2007) ‘Evidence for publication bias in video game violence effect literature: a meta-analytic review’, Aggression and Violent Behaviour 12: 470–82.

FERGUSON, C.J. (2008) ‘The school shooting/violent video game link: causal relationship or moral panic?’, Journal of Investigative Psychology and Offender Profiling 5: 25–37.

GEE, J.P. (2003) What Video Games have to Teach Us about Learning and Literacy, New York: Palgrave Macmillan.

GENTILE, D.A., P.J. Lynch, J.R. Linder and D.A. Walsh (2004) ‘The effects of violent video game habits on adolescent aggressive attitudes and behaviours’, Journal of Adolescence 27: 5–22.

JUUL, J. (2005) Half-Real: Video Games between Real Rules and Fictional Worlds, Cambridge, MA: MIT Press.

KLIMMT, C., A. Rizzo, P. Vorderer, J. Koch and T. Fischer (2009) ‘Experimental evidence for suspense as determinant of video game enjoyment’, CyberPsychology and Behavior 12(1): 29–31.

Konami (1999) Silent Hill (Konami), Sony Playstation.

KONTOUR, K. (2009) ‘Revisiting violent videogame research: game studies perspectives on aggression, violence, immersion, interaction, and textual analysis’, Digital Culture & Education 1(1): 6–30.

LINDLEY, C.A. and C.C. Sennersten (2006) ‘A cognitive framework for the analysis of game play: tasks, schemata and attention theory’, Cognitive Science of Games and Game Play, Cogsci, Vancouver, Canada.

MARCZAK, R., J. van Vught, G. Schott and L. Nacke (2012) ‘Feedback-based gameplay metrics: measuring player experience via automatic visual analysis’, in Interactive Entertainment 2012 Conference Proceedings. New York: ACM.

Mousebreaker Ltd (2004) Blast Billiards (Mousebreaker Ltd), PC.

Nintendo (1981) Donkey Kong (Nintendo EAD).

Nintendo (2010) New Super Mario Bros. Wii (Nintendo EAD), Nintendo Wii.

NEWMAN, J. (2002) ‘The myth of the ergodic video game: some thoughts on player–character relationships in video games’, Game Studies 2(1), available at: http://www.gamestudies.org/0102/newman/ (accessed August 2012).
Digital game experience is not a one-dimensional concept. Great variety exists in game genres and players, and game experiences will differ accordingly. To date, game experience is studied in a differentiated way, meaning that most studies focus on one specific game experience dimension. The objective of our study was twofold. First, we wanted to obtain a comprehensive picture of first-hand experiences of playing digital games. We conducted six focus group interviews including different types of gamers with the aim of eliciting a wide array of lay-conceptualizations of game experience. Second, we aimed to develop a categorization of game experience dimensions. This was established by discussing and integrating theoretical and empirical findings. Our categorization revealed nine dimensions: enjoyment, flow, imaginative immersion, sensory immersion, suspense, competence, tension, control and social presence. This categorization has relevance for both game scholars and game developers wanting to get to the heart of digital game experience.

KEYWORDS
digital games, focus group methodology, game experiences, player research