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Neoformalist Game Analysis
A methodological exploration of single-player game violence

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Abstract

This thesis positions itself within the scholarly debate around videogame violence. However, other than focussing on the effects of game violence which dominates much of this debate, this thesis focuses on the formal characteristics of the game and asks: how does violence in single-player videogames work? This means that this thesis explores the different rules, style elements, and narrative components that make up and surround violent encounters in games and that structure our in-game behaviours and our perceptions of these violent actions.

When seeking an approach to study these formal components, currently available ‘formalisms’ in game studies are found to be lacking. Ludology’s focus on rule systems in detriment of the game’s semantic layer does not allow for an adequate analysis of game violence since game violence is largely shaped by audiovisual cues. Furthermore, proceduralism’s focus on finding meaning becomes problematic since it does not account for the ludic function that components making up the game violence may (also) have. For a balanced analysis of rules, stylistic and narrative components, this thesis therefore borrows from, adapts, and expands on a neoformalist approach to films, and proposes a neoformalist approach to games as an alternative to both ludology and proceduralism. With a focus on the way that different devices function to structure a player’s response, this approach does not only prove helpful for an equal consideration of different formal game components but also helps to consider the player’s inherent role in actualising the perceptual, cognitive, emotional and behavioural effects. In fact, this approach functions as a poetics of game violence that takes player responses as departure points and asks which combination of devices are at work in cueing these responses.

In exploring a range of different single-player videogames with a neoformalist approach to games, this thesis first shows how different components surrounding game violence can be there for *ludic* reasons (facilitating configurative behaviour), *compositional* reasons (creating narrative), *realistic* reasons (appealing to notions of the real world), *transtextual* reasons (appealing to knowledge of other works), and *artistic* reasons (contributing to the game’s abstract shape). Furthermore this thesis explores how these different reasons suggest different play responses by

elaborating on the role of the player as both agent and spectator. The player as spectator is then triggered to evaluate the aesthetic or realistic quality of the violence, its relationship to other works, or the way the violence affects the wellbeing of an in-game character. The player as agent, on the other hand, is cued to focus on those elements that are facilitating the progress towards the game's goal thereby also cognitively evaluating and emotionally responding to the violence in the context of game progress. These very different perceptual, cognitive and emotional focus points can thus have a significant impact on the experience of game violence.

The neoformalist approach proposed in this thesis allows for some generalizable claims about the way players are cued to experience in-game violence by analysing the workings of the formal components that make up and contextualize that violence. This also means that asking how violence in videogames works is asking how violence works in relationship with the player. In response to the question of this thesis we can state that every violent encounter in single-player games works differently according to the different combinations of formal components that function together to cue certain play responses. Acknowledging this is important when one is trying to understand the experience of game violence and subsequently any potential after-effects. As this thesis suggests, such an analysis should start with a focus on the formal components of the violence to account for the many variations of that violence which will eventually help to specify any further player studies.

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Contents

Abstract	ii
Acknowledgements	iv
Contents	vi
Chapter 1	1
Introduction	1
1.1 INTRODUCTION	1
1.2 LOOKING FOR AN APPROACH: LUDOLOGY AND PROCEDURALISM	3
1.3 FINDING AN APPROACH: NEOFORMALISM	12
1.4 SOME BRIEF NOTES ON THE CONCEPTUALIZATION OF GAME VIOLENCE	17
1.5 SOME BRIEF NOTES ON GAME VIOLENCE RESEARCH	20
1.6 MOTIVATIONS AND CONTRIBUTIONS	25
1.7 OUTLINE	28
Chapter 2	30
Neoformalist Film Analysis	30
2.1 INTRODUCTION	30
2.2 THE FILM AS SYSTEM	33
2.2.1 <i>Function</i>	35
2.2.2 <i>Motivation</i>	40
2.2.3 <i>The 'Dominant'</i>	43
2.3 THE ROLES OF THE VIEWER	45
2.3.1 <i>The Perceptual Activity</i>	46
2.3.2 <i>Defamiliarization</i>	54
2.4 THE FILM IN HISTORICAL CONTEXT	59
2.5 CONCLUSION	63
Chapter 3	68
A New Game Formalism	68
3.1 INTRODUCTION	68
3.2 THE GAME AS SYSTEM	72
3.2.1 <i>Functions of Game Devices</i>	76

3.2.2	<i>Motivations of Game Devices</i>	81
3.2.3	<i>The 'Dominant' in Games</i>	87
3.3	THE ROLE OF THE PLAYER	92
3.3.1	<i>The Player as Agent and Spectator</i>	96
3.3.2	<i>Play as Intrinsically Purposeful</i>	100
3.4	THE GAME IN CONTEXT	104
3.5	CONCLUSION	112
Chapter 4		116
Game Devices and Motivations		116
4.1	INTRODUCTION	116
4.2	NARRATIVE DEVICES	120
4.2.1	<i>Cutscenes for Context</i>	125
4.2.2	<i>Characters</i>	131
4.3	STYLISTIC DEVICES	135
4.3.1	<i>Mise-en-scène</i>	137
4.3.2	<i>Sound</i>	141
4.3.3	<i>Point of View</i>	144
4.3.4	<i>Speed of Motion</i>	154
4.4	RULE-BASED DEVICES	160
4.4.1	<i>Points and Levels of Action</i>	163
4.4.2	<i>Rewards and Punishments</i>	170
4.5	CONCLUSION	174
Chapter 5		181
The Role of the Player		181
5.1	INTRODUCTION	181
5.2	APPROPRIATELY PLAYING THE DOMINANT DEVICES	184
5.3	THE COOPERATIVE PLAYING STRATEGY	190
5.4	APPROPRIATE PLAY AS AGENT AND SPECTATOR	196
5.5	THE PLAYER AS AGENT AND SPECTATOR OF VIOLENCE	203
5.5.1	<i>The Argument Concerning our Perceptual Cognitive Focus</i>	203
5.5.2	<i>The Argument Concerning our Emotional Responses</i>	206
5.6	CONCLUSION	216

Chapter 6	221
Conclusions and Perspectives	221
6.1 SUMMARY	221
6.2 ANSWERING THE QUESTION	225
6.3 LIMITATIONS	226
6.4 FUTURE RESEARCH	228
References	231
Ludography	250
Filmography	254

Chapter 1

Introduction

1.1 Introduction

How does violence in single-player videogames work? At first glance, this question appears to address an exhausted research area or at least one that contains insurmountable differences among researchers. But this question is not about the potential negative effects of violent videogame play (e.g. social learning, desensitization), nor about the potential positive ones (e.g. catharsis, increased visuo-spatial cognition). This question is also not concerned with the development technicalities of how ‘violent videogames’ are made, or with the demographics of those who play them. Instead this question addresses an essential and often overlooked key component in the study of violent games: the game system itself.

More specifically, the question is concerned with how the various components in the game system, and the system as a whole, work in cueing and constraining our perceptions and performances of the in-game violence. The focus thus lies on the various formal characteristics of violence in single-player games such as the sounds, images, rules, point of view, point of action¹, or optical effects. Asking how violence in single-player games works means asking how all these characteristics are organized to contextualize or emphasize aspects of the game violence which could significantly steer how we respond behaviourally, perceptually, emotionally and cognitively during play. Studying these formal characteristics of a game system

¹ By point of action I mean the point from which the player is able to interact with the game system. A more thorough exploration of point of action follows in chapter 4.

helps us understand in what way the game may force or allow for certain in-game violence to be performed by the player and encourage or discourage a certain perception of that violence. For instance, the game's rules may force the player to pull the in-game gun trigger or allow him to walk away. The narrative of a game may contextualize certain violence by justifying or condemning it. The game may slow down to emphasize certain violent moments and pass by other ones quickly. The game may put the player into the shoes of the perpetrator of the violence, presenting a first-person view and point of action. Or the game may encourage a more detached relationship to the violence, presenting a top-down point of view and a point and click interface.

A focus on the formal characteristics of violence in single-player games does of course lead to questions about the role of the player. Although the structures of multiplayer games are inherently more dependent on social exchange, even single-player games allow players to actively participate in the construction of the game violence. Asking how violence in videogames works therefore leads to other epistemological and methodological questions: how can we know and study the formal characteristics of game violence when that violence is constructed in a negotiation between player and system? In other words, what role does the play activity have in bringing the violence to the screen and how can we claim intersubjective access to that violence without ignoring an active role for the player?

These questions do not only concern our motor performances of the violence but also our perceptions of that violence (which is of course inherently linked up to the motor performance of violent actions). If we assume that our knowledge derived from our prior experiences influences our perceptions and performances of the game violence, we may again wonder how we can study that violence. Or, put differently, how can we study the formal components of game violence when our performances and perceptions of the violence can differ according to the background knowledge that players bring to the game?

Finally, studying the formal components of game violence also leads to ontological questions about what in-game violence is. Or better yet, since I do not intend to make any essentialist claims in this thesis, what do I mean when discussing in-game violence? How does in-game violence differ from real world violence? Is single-

player game violence the same as multiplayer game violence? And should we distinguish between different types of violence such as sexual violence and physical violence, or realistically looking violence and cartoony looking violence?

In short, the question about how violence in single-player videogames works, should lie at the core of much research into game violence yet it is strangely enough not often addressed. The system's formal characteristics function as the main motivators for play and psychological effect researchers consider these characteristics as the main cause of potential after-effects. Furthermore, the question directs attention to the function and freedom of players and their background knowledge in performing the violence in games. All in all, it seems about time to address the question.

1.2 Looking for an approach: Ludology and Proceduralism

Asking how violence in single-player videogames works is also a question that seems far too broad to be answered within one thesis. In fact, it seems a question that resists an answer altogether since violence in games comes in a variety of shapes and sizes, and, even with ruling out the social aspects of multiplayer games, one could still argue that the interactive nature of games, makes many specific moments of game violence performable in a (limited) number of ways. However, in this case (if not in any case), the broadness of a question should not discourage research into the topic of interest. Instead, a broad question can function as a departure point for research as long as that research is framed by an approach that restrains the research topic to a manageable set of focus points which in turn break the research question down into more specific sub-questions. Such an approach should facilitate what Bordwell (1996) calls 'middle level research' which claims to say something conceptually compelling about something manageable without commitment to overly broad theoretical assumptions about culture or the relationship between subjects and objects in general.

Since the question of this thesis is concerned with the formal components of game violence, we need an approach that focuses our attention on the game rather than on individual play experiences. In other words, we require a formalism. However, in game studies formalisms have gotten somewhat of a bad reputation. In his

blogpost from 2015, Juul even outlines a history of eight anti-formalisms arguing that formalism as a term is now carrying so much bad historical baggage that it is not really conducive to discussions anymore (2015). According to these arguments, formalisms prevent experimentation and exploration by erecting stifling definitions of games. Formalisms look at game rules to the detriment of story, or meaning. Formalisms assume that meanings are determined by the game system rather than constructed by players. And finally formalisms focus on game design thereby excluding a consideration of players and player experiences (Juul, 2015). While some of these arguments highlight certain problems with formalist approaches in game studies to date (see my discussion of ludology and proceduralism below), it seems to me that much of the anti-formalist sentiment is grounded in a difference of interest between games and play experiences rather than in any real disagreements about the characteristics of games or the way that players play them. As I will argue more thoroughly below, the formalist scholars in game studies do not ascribe a wholly determining role to games but simply aim to find a way to study the game's formal components through their analytical play experiences. While those approaches may not tell us much about the way that real players experience games, they do give us an effective way of looking at games themselves. In spite of the anti-formalist sentiment expressed by these player-oriented scholars, I would therefore argue that the search for an approach should still focus on formalisms.

Such a search should of course begin within the field of game studies. At first glance, it seems that game studies offers two potentially fruitful approaches: *ludology* and *proceduralism*, both of which focus attention on the system rather than on idiosyncratic play performances. However, so far, no one has sought to apply these two formal approaches for a study of game violence.² The reason for

² One notable exception is Malliet (2007a, 2007b) who has indeed attempted to apply the principles of ludology to the study of violence in games. However, as I will discuss more thoroughly below,

this, I suspect, does not lie in an unwillingness to study violence in games or even a lack of interest in the subject at hand. Instead, I believe that proceduralists and ludologists have not applied their approaches to a study of game violence because their core arguments complicate a balanced analysis of the different components of game violence.

Ludology's principle idea, according to authors like Aarseth (2001, 2004a, 2004b), Frasca (2003), Eskelinen (2001, 2004), and Juul (2001), is that games should first and foremost be studied as games, which requires a focus on the essential features of games. This leaves ludology with the ontological question about what these essential features are. Following Aarseth's (1997) concept of the 'cybertext,' which he defines as 'texts that involve calculation in their production of scriptons' (strings of signs), ludologists claim that the rule system is the single distinctive feature of games since it is the rule system that generates signs through calculation. By considering the rule system as the underlying algorithm managing the game's audiovisual representations, that rule system automatically becomes more important than the output it manages. Ludologists thus see this rule system as the essential feature shared by all games which distinguishes them from films and literature, which do not generate signs through calculation but should instead be considered as fixed strings of signs.

Although ludology's claims are justifiable and valuable, a problem arises once these ontological claims are turned into a critical toolkit for the study of game violence. After all, by focussing on the 'manipulation rules' (Frasca, 2003), ludologists are considerably less interested in what the manipulations represent. According to the

Malliet's work is more concerned with exploring the usefulness of some ludological ideas for effect research, and tries to adapt the ludological principles into the social sciences methodology of content analysis. Although his work is highly valuable and original it is less a ludological approach to violence in games and more an appropriation of some of ludology's principles (as well as other principles) for the construction of a methodology of content analysis.

more lenient point of view, the representation is ‘secondary’ to a more important rule-based structure (Konzack, 2002, p. 95) or the most ‘coincidental’ to games (Aarseth, 2004a, p. 48). According to a more hard-line ludologist like Eskelinen (2001) however, any approach that emphasizes representational characteristics, such as the way that the audiovisual elements are organized into a narrative structure, are ‘just a waste of time and energy’. To put it in Murray’s terms:

To be a games scholar of this school [ludology] you must have what American poet Wallace Stevens called “a mind of winter”; you must be able to look at highly emotive, narrative, semiotically charged objects and see only their abstract game function (2005).

If we, for instance, were to follow Eskelinen’s four basic analysis categories which he terms causal, temporal, spatial, and functional ‘manipulatable relations’, and analyse a scene in *Battlefield 3* (EA DICE, 2011) in which the player has to take out a sniper with rocket launcher, our analysis would be concerned with how the rule systems limits the player’s spatial movement to left and right movement on a horizontal plane, because moving back, or up is punished by a termination of the game session (death by sniper), and moving downward or forward is limited through collision with a solid object (wall and rooftop floor). Furthermore, our analysis could point out that the player can drag out this scene as long as he/she wishes while remaining in a covered position, but once the player has picked up the rocket launcher, thereby manipulating his character’s functionality in the game, the game forces the player to perform a specific set of actions within a specific timespan.

While such an analysis highlights some points of interest, it remains very much a description of game mechanisms rather than a thorough analysis of a violent shooting scene. By focusing attention on the game as a machine for generating signs rather than the signs themselves, ludology is limited in what it can do analytically. Perhaps that therefore, Aarseth himself also uses ludology’s principles mostly to create typologies of games (Aarseth, Solveig Marie, & Lise, 2003; Dahlskog, Kamstrup, & Aarseth, 2009), or cybertexts (Aarseth, 1997), rather than for an analysis of specific games or game elements.

Analysing a shooting scene like the one above also requires a focus on the game's representational output. Without a focus on the representation, we are missing out on the fact that the game offers a specific motivation for killing the sniper since this sniper has brutally shot one of the player's team members only moments before. Furthermore, the mechanisms that limit the player's movement do not do much else than set the boundaries for play actions. It is only when those limited movements are framed as taking cover for a highly dangerous sniper that those mechanisms start to take on other functions as well such as triggering feelings of suspense in the player.

The reason for ludology's essentialist view is understandable. As an early approach in game studies, ludology has largely been concerned with differentiating the discipline of game studies from other paradigms (mostly narratology³). In his editorial of the opening issue of the journal *gamestudies.org* Aarseth articulates his institutional motivations clearly:

Games are not a kind of cinema, or literature, but colonizing attempts from both these fields have already happened, and no doubt will happen again. And again, until computer game studies emerges as a clearly self-sustained academic field (2001).

Juul, another ludologist, even developed a game called *Liberation* to have players experience what it is like to be a game theorist and, in his terms, 'defend games from the imperialism of a thousand theories'.⁴ As a player you take on the role of a game scholar in a spaceship, and it is your task to shoot down narratology,

³ Even though ludology's main argument is set against analyses of games as narratives, it often extends into an argument against the game's semantic elements altogether. In arguing against narratives mechanisms in games, Eskelinen (2001) also includes statements against dramatic or cinematic mechanisms, and, as argued already, Aarseth (2004a) sees the semiotic system (not the narrative structure) as the most coincidental to games.

⁴ See <http://www.jesperjuul.net/gameliberation/>.

psychology, film theory, or pathology which come at you with texts like ‘theoretical imperialism’ or ‘subject object’.

In her meta-analysis of game studies as a rising discipline, Copier (2003) observes the boundaries that ludologists construct in creating an autonomous discipline. She confirms that this work conflates ontological claims with institutional motivations. As she puts it:

the construction of boundaries between game studies and other disciplines/fields combines two sets of arguments: content and definition of the object (games are games), institutional (wanting to have a discipline of one’s own and resistance to other disciplines taking over) (Copier, 2003, p. 408).

In this respect, ludology has certainly proved its worth. It has served a highly valuable institutional purpose in establishing game studies as a strong independent field of research, as well as an ontological purpose in defining games as unique cultural artefacts. However, as an analytical approach to violence in games, ludology falls short precisely because of its ontological and institutional aims. In search of the functional differences between games and other media to establish game studies as an independent discipline, ludology has focused on the rule system as the core fundamental component of the game. But for a study of violence in games, that rule system is just that: one component. To be able to say anything about how violence in single-player games works, the whole system needs to be analysed and not just the system’s core component. Aside from the rule system, videogames also have narrative and stylistic components, even if those components take on different forms and functions than in other media (as I will discuss elaborately in chapter 4). If we assume that all those components are at work in structuring the game’s violence, all of them need to be analysed.

An approach that does put more focus on the semantic layer of games but still tries to account for their ‘rule-based nature’ is proceduralism. Proceduralism, as Bogost (2006, 2007) outlines it on the basis of Murray’s (1997) claims that games have a procedural nature, does not aim to construct an ontological domain for games set apart from other media nor is it institutionally motivated. This means it does not

have the same contempt for the narrative or representational possibilities of games that ludology has. Proceduralism does, however, still retain ludology's claim for games as machines for the generation of sign combinations. In proceduralist terms this means a focus on the game's 'expressive capacity afforded by the rules of execution' (Bogost, 2007, p. 5). Proceduralism accepts ludology's claims about a game's unique functioning, and analyses the ways in which this functioning can be manipulated to express ideas in narrative or some other representational form. In his work *Unit Operations*, Bogost puts it as follows:

Instead of focusing on how games work, I suggest that we turn to what they do – how they inform, change, or otherwise participate in human activity (...). Such a comparative videogame criticism would focus principally on the expressive capacity of games (2006, p. 53).

This focus on games as tools for expressing ideas has made proceduralism an influential approach among game designers who aim to communicate specific messages through their games.⁵ And, as Sicart (2011) has noted, this focus has boosted the cultural validity of games by emphasizing them as meaningful artefacts.

However, it is exactly this focus on games as expressive tools, which complicates a balanced analysis of game violence. Because proceduralism is more interested in the game's expression of meaning⁶ rather than the functioning of a game's devices,

⁵ See for instance Brenda Braithwaite's game design project 'The Mechanic is the Message' (<https://mechanicmessage.wordpress.com/>) or many of Mike Treanor's (news)games (<http://mtreanor.com/games/>).

⁶ As I will explain more thoroughly in section 3.2.1, I take meaning to be 'the system of cues for denotation and connotation' (K. Thompson, 1988, p. 12). This means that meanings constitute the semantic layer of the game where things refer either directly or indirectly to aspects of the real world or more abstract ideas.

the main critical activity for a proceduralist is ‘reading’ or ‘interpreting’ the game to discover its meaning(s) (see for instance Treanor, Schweizer, Bogost, & Mateas, 2011 for a ‘proceduralist reading’). For a proceduralist like Bogost, a game is built up out of ‘units of pre-existing meaning [that] form new structures of meaning’ (2006, p. 50). But while proceduralists assume that all of the game’s ‘units’ are there to express meaning, in many games, and certainly in the single-player entertainment games that form the object of study in this thesis, a lot of the elements may also (or even only) have different functions. Elements may play a role in familiarizing the player with the controls; elements may be there to encourage a certain strategy; or elements may provide the player with a game goal that lies outside of the game’s semantic layer like a high score. By focusing on meaning, proceduralists turn a blind eye to game components that do not contribute meaning to the game’s overall form, or components that also have other functions. In their procedural analysis of *Burger Time* (Data East, 1982) for instance, Treanor and Mateas dismiss certain game components because, as they put it, they are ‘merely supporting the ludic metaphor, and thus can be rendered as invisible to the *interpreter* (emphasis added) (2011, p. 5).’ In this case, function becomes subordinate to finding meaning, and components that have other functions than conveying meaning are considered as invisible to the player.

For a study of violence in games such a focus becomes highly problematic. Games have a plethora of different devices, most of which have different functions. Cueing interpretation can be one of those functions but is certainly not the only one. For example, a game mechanism that allows the player to loot empty suitcases, houses, or dead bodies can be considered for the meanings it triggers. In our current time, looting refers to behaviour associated with warfare, riots or natural disasters that is specifically condemned for its immorality. However, in a game, such a mechanism also has a strategic function because it allows the player to collect valuables, which in turn allows him to acquire new weapons, or character attributes that make him more effective in achieving the game’s final goal. In this case there is even a clear dissonance between the positive strategic function of the looting mechanism, and the negative meanings that it conveys. By subordinating function to meaning, a proceduralist may conclude that the game is positively inclined towards the immoral activity of looting because instead of being presented as a punishable

action, looting gains the player an advantage towards achieving the game's goal. In other words, the proceduralist tries to resolve the dissonance between strategic function and semantic meaning by collapsing function into meaning. However, with such an analysis, the proceduralist denies one of the mechanism's purposes for being there: its strategic function.

Studying how violence in games works, requires a focus on functions over meanings. Or to put differently, it requires a poetics that is interested in how elements function to cue our responses more broadly, rather than a hermeneutics that is interested in what they mean (Culler, 1997, p. 84). This does not mean that we should follow ludologists by focussing more on the way game elements function in the abstract rule system and turn away from reading the game's semantic layer all together. Instead, studying how violence in videogames works requires an open mind to all the different functions that game devices may have, which includes meaning construction as well as more abstract strategy building. For example, does a dimly lit narrow corridor function to induce fear of violence to come, or does it function as a strategic advantage for a player's stealth activity? Does a change in music tempo function to trigger more frantic violent behaviour, or does it help to prepare the player for a high action sequence? Does a first person perspective bring us closer to the violent actions, or does it reduce the player's frame of vision to an unnaturally limited scope that produces strategic challenges but also ease and swiftness of movement?

Sometimes these functions may cue contradicting experiences such as in the looting example here. However, rather than subordinating the other functions to the game's meanings, we should take all functions at face value and decide upon the dominant function on a case by case basis. Sometimes we may not find one dominant function but several, perhaps even several conflicting functions. In such a case we should not try to reduce the multitude of functions to one dominant but instead highlight the apparent dissonance. Only by doing that can we learn to understand the way that violence in games works.

1.3 Finding an approach: Neoformalism

By outlining how ludology and proceduralism fail to provide a balanced focus on the different representational and rule-based components of game violence as well as the different functions that these components can have in cueing our play responses, it becomes clear we need a different approach. We need an approach that does not assume games to be artefacts for the communication of meanings but instead focuses on function, without reducing function to the rule-based mechanisms. In other words, we need a new formalism in game studies.

With no such approach currently available, I choose to start afresh and seek aid outside of the discipline. For a study of single-player game violence the most obvious field to turn to is film studies. After all, despite ludology's painstaking attempts at highlighting the medium specific differences between films and videogames, these two media still share a lot of the same audiovisual traits and violence has been a staple of both. Over the past few decades, a new formalism based on Russian formalism (see chapter 2), has been fairly mainstream in film studies. This neoformalism, introduced and developed by Thompson and (to a lesser extent) Bordwell (Bordwell, 1989b, 1989c; Bordwell & Thompson, 2004; K. Thompson, 1981, 1988), focuses on the film as a system, and tries to analyse how the different elements in the film system function in the overall form. So far, however, neoformalism has seen little to no application in videogame studies. Although the works by film scholars such as King and Krzywinska (2002b, 2006a, 2006b) and Wolf (2001a) are situated within the neoformalist paradigm and borrow terminology from that approach to focus their analyses towards formal game elements, neoformalism remains an unmentioned and unexplored backdrop for cherry picking ideas rather than a critically evaluated guiding approach to games. The reasons for this are likely to lie with the fact that the field of game studies has been largely dominated by its own system oriented approaches or formalisms, one of which in particular (i.e. ludology) has made zealous attempts to protect the relatively new academic discipline from 'colonizing attempts' from other fields (Aarseth, 2001). However, now that game studies has evolved from an exclusive discipline into a more open inclusive interdisciplinary field, the time seems right to explore the usefulness of neoformalism as an approach to game violence.

The reasons for exploring neoformalism as a new approach, rather than applying and altering already existing approaches like proceduralism or ludology, are threefold. First of all, if we were to expand the ludological approach so it would offer an equal focus on a game's rules as well as its narrative and stylistic components, we would hollow out the approach altogether. As argued, ludology defines itself in opposition to narratology (and semantics in general) by continuously emphasizing games as rule-based systems. This, I would argue, is ludology's foundational principle. If we were to remove that principle, then the approach really leaves very little basis for analysis, all the more so because, as I also stated earlier, ludology remains mostly an approach with ontological and institutional purposes.

Neoformalism, on the other hand, already seems to be based on the idea that all elements are equal in their potential to structure the experience of a work. While these elements obviously do not include rules, it seems more feasible to add rules as one of the equally important elements for neoformalists, rather than to break down ludology's basic principle and start over. This way, neoformalism has the potential to allow for an analysis of a much wider range of formal elements of the game violence.

Secondly, replacing proceduralism's focus on meaning with a focus on function messes with proceduralism's foundations. Proceduralism is based on 'communicative assumptions' according to which the game is considered to convey meaning through its processes. Thanks to this assumption, proceduralists have outlined an analysis scheme that helps them critically 'read' a game (Treanor et al., 2011). However, this analysis scheme loses its foundations if the basic assumption of the approach changes. Furthermore, replacing the focus on meaning with a focus on function means that the analysis scheme serves to answer a question that is no longer asked.

Also here, neoformalism appears to offer more fertile grounds for an analysis. Neoformalism explicitly 'jettisons a communications model of art' (K. Thompson, 1988, p. 7) and sees meaning (cues for denotation and connotation) as only one of the formal components that an artist uses to build a work (K. Thompson, 1988, p. 12). In this sense, neoformalism has established itself as a poetics, interested in how

formal elements are functioning to trigger our responses more broadly beyond just interpretation. While neoformalism does not focus on how elements function to cue goal-directed play behaviour, it seems that, at least in principle, its focus on function would allow for such additions.

A third reason for exploring a neoformalist approach for a study of game violence, rather than altering ludology or proceduralism is that those latter two approaches appear to have broader aims which are not conducive for an analysis of a single game object or a component of that object. With its ontological aims, ludology appears to claim itself as a general theory of games in that it tries to explain the nature and function of all games. And proceduralism appears to have even bigger aspirations by aiming to explain games as only particular manifestations of processes that exist across media, emotions, genes, cultural symbols or subjective experiences in general (see Bogost, 2006, pp. 5–6). With these broader aims, it is easy to lose track of the particularities of the games and game sequences under investigation.

Neoformalism on the other hand, as Thompson (1988) and Bordwell (1989b) have both explicitly argued, is not a general theory of films nor a grand theory explaining films as only a part of a theory of ideology or the ‘human subject’ (Bordwell, 1989b, p. 379). Instead, neoformalism is a humbler approach; it gives us a set of assumptions broad enough to make some generalizable claims about films, but it is flexible enough to allow for constant change to fit the film under investigation. Here again, we should carefully study those assumptions and adapt and expand where necessary. However, the heuristic aims of the approach make at least an exploration of those assumptions worthwhile. If adapted well it might indeed give us an approach capable of responding to the game or game sequence under investigation.

Of course, I realize that by looking into film theory for the analysis of videogames I am treading on thin ice. Aarseth warns explicitly about these kinds of transdisciplinary expeditions and says:

To see computer games as merely the newest self-reinvention of Hollywood, as some do, is to disregard those socio-aesthetic aspects and also to force outdated paradigms onto a new cultural object (2001).

Although Aarseth's hyperbolic rhetoric is politically motivated, his warning should not be taken lightly. Videogames are not films and any attempt at pushing them into a predetermined framework oblivious to videogames' medium specific qualities is destined to fail. A neoformalist approach to film will therefore undoubtedly require fundamental modifications before it can work as an appropriate analytical framework for games. Neoformalism does not mention rules as a formal device, and, perhaps more fundamentally, neoformalism is built on a specific idea of aesthetic perception that does not appear to be at the core of the gameplay experience. However, rather than shooting down neoformalism with a battle cruiser to protect game studies from empirical imperialism, as Juul has us do in his game *Liberation*, I suggest we board an exploration vessel and tread lightly and critically. Of course, any attempt at adapting an existing approach to a new medium risks hollowing out the approach altogether. However, based on the first impressions, the audiovisual similarities between videogames and films, and the flexible and heuristic nature of the approach, make it plausible that neoformalism can help to construct an interesting and appropriate approach for a study of game violence.

Like any systems approach, the new formalism I explore in this thesis is of course limited in its scope. The focus lies on the game's rule-based, narrative and stylistic devices but does not take into account the way that individual players will work with those devices in slightly different ways resulting in slightly different play experiences. Different players may come to the game with different backgrounds, different skill sets, and different motivations. On top of that, the interactive nature of videogames allows players to make changes to the formal devices presented to the player at a specific moment, which in turn will lead to even more diverse play experiences. Finally, players can go against the grain in their play performances, breaking or bending the rules or creating their own (Consalvo, 2007).⁷

⁷ It is worth flagging here, as I will also argue more elaborately in chapter 5, that breaking or bending the rules or 'creating' one's own will often still not happen outside of the (outer) limits imposed by

For a study of game violence, it may be viewed as problematic that individual gameplay sessions are not accounted for in the neoformalist approach presented in this thesis. However, such critique is first and foremost concerned with a different object of study. While some players may indeed come with very different playing strategies and understandings of the game, studying those play experiences tells us more about the players than about the formal components of game violence and the way they encourage certain actions and understandings over other ones. When the interest lies in the functioning of these formal components, as it does in this thesis, then different play experiences become a methodological challenge rather than objects of analytical interest. As long as we can agree on the existence of a game system that cues more and less appropriate play performances, then we just need to figure out a way around the inappropriate ones in order to focus on that system.

As I will argue more thoroughly in chapter 5, one way to focus on the formal components of game violence is to adopt a so called *cooperative playing strategy*. This analytical strategy stands in a longer philosophical tradition where the recipient of a text is considered as a theoretical construct rather than an actual person. In literature studies for instance, Iser thoroughly explored the concept of the implied reader as the predispositions laid down by the text in order for the text to exercise its effect (1978, p. 34). And in film studies, the neoformalists indeed see the viewer as the background knowledge implied by the film's cues which is necessary for the film's effects to occur (K. Thompson, 1988, p. 29). Just like these

the game system. As Leino (2010) has argued convincingly, cheat codes are coded into the game and also 'emergent' strategies such as rocket-jumping in *Quake* (id Software, 1996) simply show that the limits of the game system were not where we once thought they were. We may of course imagine our own additional restricting rules, such as only firing our gun while in slow-motion jump in *Max Payne 3* (Rockstar Studios, 2012). However, the question in many of these cases still remains, does this tell us something about the game and what the game encourages or rather about individual play behaviours?

constructs, also the cooperative player helps to focus on those formal components of the game and the way that they encourage a certain play experience.

As stated, an approach always limits the scope of the research to a manageable set of issues. And for that reason, any approach is also forced to justify why some issues are not accounted for within its confines. For a systems approach based on neoformalism, this justification runs throughout this thesis, particularly in explorations of the role of the player in chapter 5. In short however, this thesis justifies its research scope by arguing that the single-player videogame is able to significantly confine the player's freedom to exercise influence on what happens in the game, and that certain assumptions about the role of the player can facilitate an analysis of game devices and their functioning in cueing certain play experiences of the game violence.

1.4 Some brief notes on the conceptualization of game violence

While this entire thesis is concerned with the different formal components making up game violence and thereby elaborately discusses many forms that game violence can have, I believe it is necessary to start off with at least some basic premises on what I consider to be game violence in this thesis. This is both to clearly delineate the object of study and to help start the exploration and prevent potential misunderstandings.

First of all, when I talk about game violence, I mean something that is inherently different from real world violence. While this may sound like an obvious distinction, it is disconcerting to see how little thought is given to this difference in the literature on effects of violent games. As Goldstein puts it:

There is much confusion about the definition of “violence” and terms like “media violence” and “violent video games.” Psychologists define violence and aggression as “the intentional injury of another person.” However, there is neither intent to injure nor a living victim in a video game (2001, p. 2).

A similar point is made by Kerr in discussing aggression and violence in sports. He states that the psychological definitions of violence do not apply to sports violence since they do not account for ‘the unique context’ in which sports violence takes

place. This context make the violence ‘intrinsic’ to the competitive nature of the sport and, unlike real world violence which is generally considered illegal, sports violence is ‘sanctioned’ within its own rule system (2005, pp. 7–8).

In line with these arguments, I start with the basic premise that game violence is different from real world violence because it is part of a game where different rules apply giving violence different functions within a game context. First of all, this means that, unlike real world violence, game violence can never be considered an illegal activity because the rules of the game sanction the performance of the game violence. It could of course be that the game itself is considered illegal in a specific country due to its excessive violent content. However, in that case, it is still not the performance of the violent act in the game that is illegal but the selling, buying and playing of the game in general. Secondly, the fact that the violence occurs in a game also means that the act itself as well as its consequences are different from the act that it represents. This does not mean that game violence cannot have real world consequences. However, the consequences of an in-game head shot are not the same as the consequences of a real word head shot. Finally, I would argue that game violence, by the sheer fact of being performed in a game, is playful which means that actions are, intrinsically purposeful. We do not perform violence in a game for other purposes than for the purpose of play. This makes game violence, in Apter’s (1991) terms, paratelic (also see chapter 3.3.2).

A second note to make about the conceptualization of game violence used in this thesis, is that I focus specifically on the representation of interpersonal or collective physical violence rather than for instance sexual or psychological violence or self-directed violence. Here I draw from the typology of violence that is adhered to by the World Health Organization in their *World Report on Violence and Health* (World Health Organization, 2002). This report distinguishes between four ways in which violence can be inflicted, namely physical, sexual, psychological, and deprivation. The report further distinguishes between different types of violence based on three different victim-perpetrator relationships: self-directed, interpersonal, and collective. By focusing on the representation of a physical type of violence between human-like (or animal-like) individuals or groups, I believe that I am accounting for most of the violence one can find in videogames to this

day. Videogames (and probably games in general) commonly employ mechanisms of conflict where the player has to overcome challenges that the game puts forward which leads to either winning or losing. One of the easiest ways to represent these states of winning or losing is by representing it as living or dying. Not surprisingly, the conflict in these games is therefore often represented as physical violence; a matter of killing or being killed. Unlike sexual violence, or psychological violence, this type of physical violence can therefore be found across the different generations of videogames, from the current day shooter to *Space Invaders* (Taito, 1978) where the collision between a bullet and an alien already lead to the physical destruction of the latter.

However, there are certainly also games dealing with different types of violence such as *RapeLay* (Illusion Soft, 2006), in which the player's goal is to stalk and rape a mother and two daughters. The reason that I choose to exclude these types of violence is simply because I believe that these types of game violence fall outside of the norms that the game industry, as well as many lawmakers and players find morally acceptable. This throws up challenges for certain claims around the ludic functionality of game violence proposed in this thesis. One could for instance rightfully ask whether removing a character's clothing during a rape scene can still be seen as a ludic challenge even if the game frames it as such. In these cases, our moral objections will likely overrule the game's ludic justification for the mechanism. While I will certainly mention the challenges that a different conceptualization of game violence would throw up for specific claims in this thesis, it is important to focus the object of study in order to prevent these kinds of misunderstandings.

A third note on the conceptualization of game violence, concerns the games. When I talk of videogame violence in this thesis, I use the term videogame or game to refer to single-player videogames unless it is explicitly stated otherwise. The focus on single-player games is important for a systems approach like the proposed new game formalism to make any epistemological claims. After all, a systems approach is based on the assumption that the materiality of the system is capable of significantly structuring the gameplay, but gameplay in multi-player games is to a large extent governed by social norms and negotiations rather than the materiality

of those systems. For instance, despite the fact that many multiplayer games allow for players to harass or irritate one another through unjust killing or stealing (*griefing*), that kind of behaviour is condemned by the majority of players and therefore actively discouraged by the social norms rather than the material structure. Single-player games, however, have a much more definitive structure with much of a gameplay performance forced or encouraged through elements ‘hard-coded’ in the material of the system. This means that a focus on single-player systems indeed allows for claims about how game violence works. Like the focus on physical violence, this focus on single-player games is not a matter of choosing the games to confirm the approach, but simply a matter of knowing the boundaries of the approach. Although the neoformalist approach to games presented in this thesis may be able to say something about how violence in multi-player games works, those claims can be mitigated or even contradicted by the social structures in place in those games that take hold wherever the material structure leaves room for negotiation.

Finally, I should note that the examples discussed in this thesis are mostly perceptually realistic examples of game violence. While I do not necessarily only focus on perceptually realistic game violence, these are the types of violence that are the most interesting for a consideration of their formal elements and the way these elements cue our responses. These types of violence are, after all, the types that trigger social concern and form the focus points of the effect research. However, as I will argue further in chapter 4, graphics and narrative devices such as characters, objects, and narrative justification can differ per videogame, thereby leading to many different variations of game violence. So, while my interest is mostly in the violence in a game like *Grand Theft Auto V* (Rockstar North, 2013), also the conflict in *Super Mario Bros.* (Nintendo, 1985) can be considered as a form of game violence that could be studied for the same formal characteristics and functions outlined in this thesis.

1.5 Some brief notes on game violence research

As Gonzalez notes in an elaborate history of videogame controversies, game violence has been a constant subject of controversy almost as soon as videogames came into existence (2004). As early as 1976, controversies arose around the violent

content of the arcade game *Death Race* (Exidy, 1976). Although the game's imagery does not look much more advanced than *Pong* (Atari Inc., 1972), the fact that the player could see himself drive his car into 'gremlins' whose pixelated stick-figure representation could be associated with humans was enough for the game to become the centre of bad press and public protest (Plunkett, 2012). Although the game's tagline was: 'It's fun chasing monsters,' the further lack of context and the game's clear tie in with the film *Death Race 2000* (Corman & Bartel, 1975) meant that the game's content was easily associated with driving over pedestrians⁸ and thus considered morally objectionable. Over the years videogames grew in popularity and became more and more sophisticated. Their representational content gradually became more graphically detailed with especially games in the early nineties such as *Duke Nukem* (Apogee Software, 1991), *Wolfenstein 3D* (id Software, 1992), *Doom* (id Software, 1993) and of course *Mortal Kombat* (Midway Games, 1992) sparking controversies.

Around this time, also the interest from academic communities grew as it remained up to them to provide insights into the potential negative effects of violence in games that had continued to spark these social and political anxieties. Today this question about the possible impact that violent game content can have on its players still dominates research around violence in videogames but so far little agreement has been reached on the matter. In general, the impasse exists between two approaches: one approach that is particularly concerned with real-world social problems like real world violence and tries to investigate the potential cause of these problems in the experience of videogame violence, and another approach that criticises the first approach for making players look like passive victims of game violence while they should be approached as active users participating in meaning construction processes of culturally relevant media products (Jenkins, 2006;

⁸ Adding to the controversy was the fact that the game's working title had apparently been 'Pedestrian' making the association with driving over pedestrians all the more feasible.

Livingstone, 2002). Support could be provided for both sides of the debate. The intention to protect children from potential ‘harmful’ content appears to be an admirable one, but it does run the risk of singling out and scapegoating one of the many potential correlational or causal factors of societal problems, which in turn could lead to unjust censorship or other constraints on the freedom of expression. Similarly, defending freedom of expression by highlighting the many different variables at play when we study the effects of game violence is both valuable and necessary. But also this may lead to a defence of media content ‘at all costs’ which can ignore the ethical responsibility of game developers. Furthermore it does not seem very beneficial to research into the potential effects of violence in videogames when any kind of effect is a priori shrugged off as unfounded media panic (also see (Eitzen, 2014) for a thorough and comprehensive analysis of this discussion).

If we follow Zagal (2010a) and consider videogame studies in its broadest sense as an interdisciplinary field containing social scientific player- and effect experiments, humanities based text analysis and player studies, and engineering studies into efficient game design, it seems that the disagreement about game violence creates a tension that lies at the core of the field. Paraphrasing Malliet (2007b, pp. 8–9) this dichotomy can be seen to exist between two of these three schools of research within game studies: humanities based ‘game theory’ and the social scientists. Also Aarseth (2007) recognizes this dichotomy and, in an attempt to build bridges and encourage cross-disciplinary collaborations, he tries to clarify the differences between the humanities and social sciences camp in both their different uses of methodologies and, perhaps even more importantly, in their different objects of study. He argues that for the humanities scholar, the ‘empirical target is the game as an aesthetic object’ which is best approached through a methodology of close playing (Aarseth, 2007, p. 131). On the other hand, for the social scientist, the ‘empirical focus is the other players’ who are best approached through ethnographic methodologies like observation or surveys (2007, p. 131). Adhering to the same distinction and drawing from Bogost’s (2008) discussion about the object of study in game studies, Leino adds that also the purpose of research for these two schools may be inherently different. He summarizes this as follows: ‘It seems we can fairly state that what we can conceptualize as the ‘distinction’ between “those who study

players” and “those who study games” is in fact a composite of several variables: methodology, object of study, and purpose of the research’ (2010, p. 84).

In line with these arguments, we would expect the debate about videogame violence to be held between game analysing humanities scholars and player observing social scientists. But, although Aarseth (2007), Bogost (2008), Leino (2010), and Malliet (2007b) adequately outline a distinction between those studying players and those studying games, superimposing this distinction onto the ‘violent videogame debate’ risks oversimplifying it. First of all, it is simply incorrect to equate the game-player distinction to a difference between humanities scholars and social scientists. After all, the humanities side of game studies is not purely concerned with studying games as it is not uncommon for a humanities scholar to use interview- or observation methods in combination with personal play experience to focus on player’s perceptions and behaviour as objects of study (Consalvo, 2007; Schott, 2008). Similarly, social scientists have long applied content analyses to categorize and study media content which comes much closer to a study of games than a study of players (Malliet, 2007a; S. L. Smith, Lachlan, & Tamborini, 2003). It thus appears that the game-player distinction is not necessarily one that divides research schools but one that permeates these schools individually. This is because player and game are two sides of the same coin; intrinsically linked in questions concerning epistemology (how can we know a game without filling the shoes of the player?), ontology (is there a game without a player?), and methodology (how do we study games without studying player actions?).

Secondly, although the violent game debate is often held between humanities scholars (e.g. Goldstein, 2001; Jenkins, 2006) on the one end and social scientists (e.g. C. A. Anderson, Gentile, & Buckley, 2007; Bushman, 2004) on the other, the two sides of the debate are not limited to these schools of thought. This shows especially on the side with the more positive attitude towards games where also social scientists have grown more interested in different experiential components of the play experience like deep engagement/immersion (e.g. Brockmyer et al., 2009) and socialization (e.g. Jansz & Martens, 2005), and where scholars with an engineering background have become involved in studying the emotional experience of gameplay (e.g. Nacke, 2009). For pragmatic convenience, (and

without normative intent) it is therefore more useful to refer to the group of scholars with more positive predispositions towards games as making up the school of videogame studies with its primary focus on the aesthetic, cultural, and communicative qualities of games.⁹ With an interest in the potential negative effects of game violence, the other group of researchers is then best described as media effects researchers.

A third and final problem with applying the game-player distinction to the violent videogame debate is that, although the two sides of the debate often differ in their empirical target, this is not so much a difference between games and players but rather one between different stages in the gameplay process. While one side of the debate, which I will now simply refer to as videogame studies, mostly focuses on the moment of play where both the player and the game require equal scholarly attention, the other side focuses on the effects following play where the player's post game behaviour and perceptions form the object of study. In the first case, the researcher may ask questions about the game's design characteristics perhaps taking the design intentions into consideration, or he may ask questions about the player's behaviours or perceptions during play which may extend into inter-textual inquiries about the player's previous media use or other contextualizing factors. In the second case, however, the researcher takes the moment of play as a constant independent variable that he may change in order to answer questions about how the player's views or behaviours are influenced by that preceding moment of play.¹⁰

⁹ This focus is also articulated in the mission statement of the journal gamestudies.org (see <http://gamestudies.org/1202/about>).

¹⁰ This empirical difference between gameplay and post-gameplay is different from another also often held debate around media violence: that between the uses and gratifications approach and the media effect approach. In that case, the empirical difference is most often between pre-gameplay and post-gameplay because, originally, the uses and gratifications approach holds a position that is mostly concerned with the selective motivations that exist prior to the actual media use, which allows them to argue that users choose media to satisfy their needs and reach the desired arousal state

Following these considerations, we can say that this thesis fits within the school of videogame studies with a specific interest in critical reflection on violence in games. However, within this rather broad school, this thesis aligns with a narrower group of scholars who have an interest in the formal characteristics of games. This thesis is for instance not interested in the intentions of the designers behind the different game components, even though, within videogame studies, an exploration of the biography or psychology of the different game designers is well worth undertaking. This thesis is also not interested in the various idiosyncratic ‘playings’ of a videogame, even though personal behaviours and thought patterns of players are certainly worth studying within videogame studies. Instead, this thesis focuses on the system characteristics of violence in games thereby linking up with other formalist approaches like ludology and proceduralism.

1.6 Motivations and Contributions

Although this thesis fits within videogame studies, this does not mean that it takes sides in the effects debate. As I argued above, effect research has a different empirical target that does not necessarily contradict or oppose this thesis’ object of study. In fact, this thesis complements effects research into game violence because it provides a closer look at the system properties that constitute the independent variables in the experiments of effect researchers. Analysing the different ways in which single-player games structure violence and cue certain play responses over others (whether the players have those responses or not) can then even help to focus future research into media effects and/or point out any discrepancies in previous studies by taking potentially mediating factors into account.

(Biocca, 1988). It should be noted that the uses and gratifications paradigm has been extended to also incorporate selective perception and even selective retention (recall) (Biocca, 1988), however, in its original (and strongest) form uses and gratification theory is used to describe selective exposure to media.

However, the main contribution of this thesis is not to the school of effects studies but to the school of videogame studies. In the broadest sense, this thesis contributes to a growing body of research into the formal components of games (i.e. ludologists and proceduralists) and how those components are manipulated to cue certain play responses. In this sense, this thesis also links up with research into game design since it claims connections between specific single-player game structures and hypothetical player responses. However, here the game devices are not analysed to see how, or in what interrelation, they could function to trigger the most appropriate and pleasurable player responses sought after by the game designers. Instead, game devices are analysed to see how they form and frame game violence in certain ways, thereby encouraging certain perceptions and performances of that violence.

In a narrower sense, this thesis focuses on the violence in single-player games as structured by specific combinations of rules, style elements and narratives. As noted, the formal characteristics of videogame violence have been largely unexplored within videogame studies. While quite a few attempts have been made to focus on the formal characteristics of game violence through the methodology of content analysis (Dietz, 1998; Hartmann, Krakowiak, & Tsay-Vogel, 2014; S. L. Smith et al., 2003; K. M. Thompson, Tepichin, & Haninger, 2006), these approaches are mostly suitable for quantifying different game content categories, but often lack thorough discussions of the categories themselves and the functions of these categories in encouraging certain play responses. One notable exception however, is Malliet (2007a, 2007b), who has aimed to apply the principles of ludology for a content analysis of game violence. However, upon further scrutiny also Malliet's approach is still aimed at quantitatively exposing different content categories rather than qualitatively analysing them. This becomes especially clear when the few thoughts that Malliet does give to the functions of these different categories are all borrowed from media effects theories such as the social learning theory, the desensitization argument, or the arousal argument. Here it shows that Malliet is not interested in how the formal components making up game violence may cue certain immediate play responses. Instead, Malliet is interested in quantitatively categorizing game violence to see how these categories may mitigate or aggravate the after-effects studied by effects scholars. While this makes his research highly valuable for a further refining (or debunking) of correlations found

in media effects studies, it still lacks the thorough exploration of the functions of the devices at play during in-game violence.

This thesis fills this gap in the research by focusing on the formal components of game violence and their functions in cueing certain immediate play perceptions and performances of that violence. In doing so, this thesis also discusses the challenges that come with such a focus. More specifically, the contribution of this thesis is focused around three levels. On a *theoretical level*, it explores neoformalism as a new way of looking at games and more specifically at violence in single-player games. By looking at the usefulness of film neoformalism and adapting and expanding it by taking essential theory work in game studies into account, a neoformalist game approach is shaped that provides us with insights into how different devices function in relation to each other in the formal whole of the game system, and how these devices function to cue play responses. According to this neoformalist approach, the devices cannot fully determine these play responses since those responses are considered the result of an interplay of the game's devices and the player in a particular historical context. In order to still gain intersubjective access to the game devices and their functions, the approach provides a set of assumptions about the processes that players go through in performing and perceiving the violence. It then becomes the basic task of the analyst to perform the encouraged play responses and then identify and study the system's devices at work that are cueing those play responses.

On an *analytical level* the new formalist approach helps to build a useful framework for the study of violence in single-player games. This framework highlights three distinct categories of game elements that all play an important role in cueing experiences of the game violence: *rules*, *narrative* and *style*. Of course, these categories can be found in many modern day videogames (with the exception of abstract games) and can thus be studied for the different ways in which they function to trigger any particular play response. However, in this thesis, the interest lies in the way that these elements function in cueing certain responses to the game's violence. By identifying the player as both *agent* and *spectator*, the approach discusses the different perceptual, cognitive, emotional and behavioural processes

that characterize these different roles and helps to analyse how different game devices can function to cue these different processes.

Thirdly, on an *applied research* level this thesis also contributes to the violent games research community by showing the possible results of a neoformalist approach to a wide variety of games that have been given an R-rating (restricted) in New Zealand. Similar to M (mature) and A (adult) ratings in the USA, or the PEGI 16 and PEGI 18 ratings in much of Europe, R-ratings are largely dependent on ‘the level of violence’ in games (see www.censorship.govt.nz). Games that deal with violence during significant periods of the game, have violence of a certain level of intensity and deal with that violence in a certain manner (e.g. realistic or scary rather than funny), receive an R-rating and may therefore only be bought and played by players over the age of 16 or 18 (depending on the label) (see New Zealand OFLC, 1993). By analysing a number of R-rated games, I intend to highlight different interesting game devices that foster the application of certain backgrounds and activities in triggering our responses to the violence in these games.

Finally, outside of academia, this thesis also hopes to contribute to the public policy regarding game violence and young players and more generally to a better-informed perception of videogame violence in society. Of course the step from academia to social perception or public policy can be a large one with policy makers often requiring straightforward evidence based answers that a humanities approach to videogames would find difficult to produce. However, by presenting a new formalist approach to violence in single-player videogames that is capable of highlighting the system elements at play in encouraging certain play responses, this thesis hopes to take a small step into the right direction.

1.7 Outline

Ordered per chapter, the thesis looks as follows:

2. **Neoformalist Film Analysis:** This chapter provides a critical overview of the neoformalist approach to films according to its three main pillars: system, viewer, and context.

3. **A Neoformalist Approach to Games:** This chapter outlines the fundamental assumptions of a neoformalist approach to videogames by exploring and adapting the premises of film neoformalism and setting these off against ludology and proceduralism as the two dominant formalist approaches in game studies.
4. **Devices and their Motivations:** This chapter further explores the usability of the neoformalist approach for the study of videogames and videogame violence and outlines three categories of devices whose interrelated functioning encourages certain play experiences. By closely analysing the different devices, this chapter shows how certain devices can frame the violence as more or less justified in the narrative, voluntary or forced by the game's rules, realistic, ludically significant, aestheticized, or more or less proximate to the player.
5. **The Roles of the Player:** This chapter deals more thoroughly with the methodological challenge of an active player. The proposed theoretical construct of a *cooperative player* allows us to perform the appropriate responses according to the game's functioning which in turn gives us access to the formal components of game violence while still recognizing that different players may perceive and perform the violence in different ways. Furthermore, the chapter links up with the previous one and further explores the different perceptual, cognitive, and emotional focus points that different motivated devices can have, thereby significantly changing our experience of the game's violence.
6. **Conclusions and Suggestions:** This final chapter summarizes the findings from the application of a neoformalist film framework to a range of R-rated games and proposes a neoformalist approach to videogames. The chapter finally suggests some further research directions with regards to the experience of violence in games and outlines the potential benefits of a neoformalist game approach for the study of a range of other game related topics.

Chapter 2

Neoformalist Film Analysis

2.1 Introduction

When videogame scholars analyse a game, a range of games, or even one characteristic of games, they do so in accordance with a set of assumptions about the different characteristics of games, the processes that players go through when playing, and the way that games relate to other media and the world around us. These assumptions make up an approach. Sometimes such an approach is explicit, such as in Malliet's (2007b) analysis of violent game content where certain principles of ludology are outlined and then used as a framework for analysis. Other times the approach may be more implicit, shining through in the analysis itself. In Zagal's (2012) analysis of ethics in a range of different games, for instance, no a priori assumptions are outlined yet his analysis shows clear ideas about the processes that players go through in their understanding of the game and the guiding role that the game's narrative and ludic components play in these processes.

In many cases the chosen approach helps to focus on a specific object of study by providing certain assumptions about the object of study and other elements that are inherently tied up with the object of study but remain outside the scope of the research. In other cases, however, the approach is not the means to an end but the end in itself. In such cases, the game analysis serves to demonstrate the validity of a certain approach, and in doing so, the games are often carefully chosen to confirm that approach rather than to challenge it. In these cases the preconceived ideas risk becoming inherently self-fulfilling: if you assume that the elements in a game play a role in expressing a certain meaning, you will undoubtedly find the elements reinforcing your assumption even when those elements also, or even mainly, have other functions. The risk of a highly determinant approach only becomes apparent once a game is analysed that challenges the approach's core assumptions. Eskelinen's (2001) ludological approach would for instance be highly inadequate for an analysis of *Heavy Rain* (Quantic Dream, 2010) where all the player's actions

serve to unfold the game's narrative. And proceduralism struggles when for instance Treanor and Mateas (2011) try to find meaning in the 'meaningless' *Burgertime* (Data East, 1982) or when Murray (1997) famously tried to find the meaning in *Tetris* (List, 1984).

Choosing an approach is thus a precarious task. When we choose an approach to study game violence, we want to make sure it fits the topic of interest, yet we do not want the approach to start determining our findings a priori. A good approach should be more focused than a general theory that tries to explain the fundamental nature of all games, yet it should be more general than a method that only constitutes the procedures for doing one particular analysis. In other words, the approach should provide us with a framework for studying the formal components and functioning of game violence, but it should not determine certain formal components and functions a priori.

Neoformalism, at least in principle, promises to be such an approach. As it is outlined in film studies by Bordwell and Thompson (see Bordwell, 1985, 1989a, 1989b, 1989c; Bordwell & Thompson, 2004; K. Thompson, 1981, 1988), neoformalism promises to guide research into form aspects without predetermining their relevance or their functioning during a specific film(sequence). The toolkit that neoformalists bring to the analysis is, as Bordwell puts it, 'grounded in a theoretical *activity* [emphasis in original] rather than a fixed theory' (1989b, p. 380). It is not something that explains every film according to the same mechanisms but instead provides some helpful focal points, or what Bordwell terms 'hollow categories' (1989b, p. 381). These hollow categories do not tell us how for instance a specific formal element will function every single time, since neoformalists argue that that depends on the combination of formal components and their various functions in a specific film during a specific moment in time. However, the categories do help to distinguish between different types of formal elements and different types of functions. In the end however, the film is always the guiding force that drives the analysis.

Neoformalism's 'modus operandi' is probably best formulated by the Russian Formalist Eikhenbaum on whose work neoformalism builds. He states:

In our studies we value a theory only as a working hypothesis to help us discover and interpret facts; that is, we determine the validity of the facts and use them as the material of our research. We are not concerned with definitions, for which the late-comers thirst; nor do we build general theories, which so delight eclectics. We posit specific principles and adhere to them insofar as the material justifies them. If the material demands their refinement or change, we change or refine them (as cited in Bordwell, 1989b, p. 381).

In response to these promises of flexibility, we may rightfully ask whether neoformalism is not somewhat of a hollow framework that can be applied to everything but tells us nothing. Or, put differently, to what extent does neoformalism then provide analytical categories or departure points to help guide the analysis? It is the aim of this chapter to seek an answer to this question and thoroughly study the different analytical categories and theoretical assumptions that make up the approach. While a study of a neoformalist film approach may feel like somewhat of a digression in a thesis about violence in videogames, this study is essential because it allows us to examine the strengths and weaknesses of the approach which will eventually help us see where adaptations and extensions are necessary before the approach can form a useful framework for the analysis of game violence.

I have divided this chapter into three sections that correspond to the three main focus points of the neoformalist approach. In section 2.2, I will explore how neoformalists see the film object as a system built up out of different interrelated materials that are manipulated in such a way as to cue certain viewer responses. The neoformalist sets himself the task of analysing the devices that manipulate the film's material and focuses on those devices that the film foregrounds as the more important ones in cueing our responses. To understand how the film's devices function to cue responses, neoformalists assume the existence of an intelligent filmmaker and then consider the 'reasons' (motivations) that this filmmaker may have had to add these devices. However, neoformalists only need the suggestion of authorial intent because the presence of the different devices is eventually based on the work itself and the way the devices function in cueing our viewing responses.

While neoformalists see the viewing response as significantly encouraged by the film object, this does not mean that they consider the viewer to be a passive consumer. Instead, as I will explore in section 2.3, neoformalists consider the viewer active and important for two reasons. First of all, neoformalists argue that the viewer comes to the film with certain skills and background knowledge that play an essential part in constructing the film's form (Bordwell & Thompson, 2004). In this sense, neoformalists adhere to a constructivist view of film perception where form is attributed to the film rather than found in it (which, as I will argue, raises important questions around the intersubjective access to the film). Secondly, the viewer is considered important because neoformalism is a poetics that starts with the viewer responses and then asks what devices are at play in cueing these responses. Because neoformalists argue that the main function of films is to trigger a special kind of non-practical perception, this non-practical perception becomes the starting point for undertaking the analysis.

Finally, as I will discuss in section 2.4, neoformalism does not view the film as a self-contained system but assumes that it exists in a historical context where viewer backgrounds play an important role in shaping the perceptual response. However, by assuming backgrounds as a shared set of norms during a particular moment in time, neoformalists can still claim intersubjective access to the film's form on the basis of those backgrounds, and also account for changes in film perceptions over time.

2.2 The Film as System

As an approach to films, neoformalism was first developed by Thompson in 1981. Unsatisfied with the analytical toolkits available to her in film studies, she decided to draw upon the Russian Formalist movement in literature studies to develop a 'new formalism' that allowed her to discuss the function of a range of formal elements such as narrative, mise-en-scène, editing techniques or sound in Eisenstein's film *Ivan the Terrible* (Eisenstein & Eisenstein, 1958).

In line with Russian formalism, neoformalist film analysis eschews a romantic concentration on the artist and instead aims to shift the focus to the work itself. For the neoformalist film analyst the focus lies on the formal characteristics of the film,

rather than on the director and his or her intentions. This does not mean that neoformalism considers the film somehow detached from its makers. In fact, the neoformalists are very clear about the fact that a film should be considered as something that is ‘crafted’ by a ‘skilled artisan’ out of cinematic materials such as sound, camera framing, editing, *mise-en-scène* and optical effects (K. Thompson, 1981, pp. 12–13, 26). The use of terminology here signifies the film as a ‘constructed system’, a ‘machine’¹¹ that is put together by its makers rather than for instance an organic ‘growth of ideas from the material’ itself, as Thompson argued that the New Critics see a work (1981, pp. 12–13).

The neoformalists also do not see the film system as divorced from its viewers since, as Thompson puts it, ‘backgrounds from other artworks (...) and everyday reality’ affect it (1981, p. 15). This means, as I will explain more thoroughly under section 2.3 and onward, that the viewer’s knowledge of other works and everyday reality allow him or her to recognize familiar elements and detect deviations from the norms of his or her prior experiences. Although it seems that here neoformalism is leaning towards more audience-oriented approaches that privilege a viewer’s personal perceptions of the work over the work itself, neoformalism argues that the background knowledge that the viewer draws upon is implied by the film’s formal devices. Or, as Thompson puts it in drawing from the Russian formalists, the viewer is ‘a construct suggested by the work itself’ (1981, pp. 15–16). Furthermore, as I will argue in section 2.4, neoformalists consider that the background information that a viewer draws upon is finite during a particular moment in history. So, by following the cues in the work and drawing from a finite amount of available

¹¹ The wording of machine might seem odd here. However, Neoformalists draw this terminology from Russian formalists who indeed also considered literary works as machines. According to Steiner (2014), the machine metaphor is probably the most prominent one as it was advanced by Shklovsky (see for instance Shklovsky, 1965). As Steiner (2014, pp. 41–42) notes, Shklovsky used this metaphor to focus more on the workings (the how) of a literary work, rather than its meanings (the what).

information, the neoformalists perform the effects cued by the film, and gain access to the film's formal elements through that effect.¹²

Neoformalism's approach to films as systems resonates with approaches like ludology and proceduralism that frame games as systems. In this sense, neoformalism can provide a way of thinking about games as a combination of interrelated components and helps our understanding of the role of the player in that system. Of course, as I will argue in the upcoming chapter, the filmic system is inherently different from the game system and the role of the player differs distinctly from the role of the viewer. Yet, neoformalism's assumptions about the system as independently existing material capable of shaping its own use, helps our understanding of how games confine the player's freedom to exercise influence on what happens in a game, and how we may gain access to that material. This then helps to construct a new formalist approach that counterbalances player-oriented approaches that argue that games are socially and culturally defined practices that can only be approached as individual play experiences (e.g. Malaby, 2007). Studying violent games with a neoformalist inspired, system-oriented lens can be highly fruitful because it allows us to look at the way the system structures the violence, which in turn allows us to make claims about how the player is expected to behave and perceive in accordance with that structure.

2.2.1 *Function*

Although neoformalism focuses on the film as system, it is not interested in the material as such but rather in the way that the material is shaped to cue a kind of

¹² Here, 'effect' takes on a somewhat different meaning from the way that I have used it so far. While media effect studies generally focus on effect as a rather definitive alteration of thought patterns or behaviour resulting from media use, for neoformalists, the term effect is often used to signify more immediate experiences of the film. To avoid confusion, I will therefore now use 'after-effect' when referring to a media effect understanding of the term.

aesthetic perceptual response. Here neoformalism shows itself as a functional approach. Although neoformalism is interested in the film's form, that form is only interesting for the way it triggers a specific type of aesthetic perception. Neoformalism's focus on function and aesthetic response borrows heavily from the Russian formalist approach to art. According to Shklovsky (1917/1965), the difference between art and non-art does not lie in the used material or in the techniques used for manipulating that material. Instead, the essence of art for Shklovsky lies in the way that certain techniques are employed to manipulate the material for the purpose of achieving a certain aesthetic response, which he calls defamiliarization (see section 2.3.2). Language and techniques like hyperboles or parallelisms that manipulate language, can be used for practical every day purposes (prose) as well as aesthetic purposes (poetry). But the interest of the analyst should lie in the way that the techniques of hyperbole and parallelism function in triggering an aesthetic response.

Neoformalism adopts this view and argues that a film's material of *mise-en-scène*, sound, camera/frame, editing, and optical effects, can be manipulated with a range of techniques such as a specific use of lighting in the *mise-en-scène* or specific continuity editing (K. Thompson, 1981, p. 26). However, the interest of the neoformalist lies in the way that these techniques, which they refer to as devices,¹³ function to cue an aesthetic response. For instance, where editing can be used to make both a TV commercial and a feature film, it is only in the feature film that

¹³ It should be noted that Thompson (1981) is somewhat unclear about the material/device distinction, and uses the terms interchangeably (see for instance page 26 and 70). However, following Shklovsky (1917/1965) it makes sense to distinguish between material and specific use of the material in the form of devices since it is the set of devices that constitutes the work's form, not its material. Because neoformalism builds largely on the work of Shklovsky and because Thomson-Jones (2009) also attributes the material/device distinction to neoformalism, I choose to describe neoformalism here as adhering to this distinction.

editing is temporally and spatially structured in such a way that it does not serve some other practical purpose (selling something) but an aesthetic one instead.

As I stated before, the focus on an aesthetic response rather than meaning, makes neoformalism a poetics. Unlike a hermeneutical approach which would be interested what a film means, neoformalism is interested in film devices for the ways they trigger all of our perceptual, emotional, and cognitive responses to the film as long as those responses do not serve some other practical purpose. As I will argue below, this non-practicality is important for neoformalists because it indeed facilitates the ‘defamiliarization’ that also the Russian formalists were interested in. However, for now, outlining neoformalism as a poetics focused on aesthetic non-practical responses helps to see how neoformalists focus on function over form. In other words, when neoformalists ask: ‘how does a film work?’ they actually mean: ‘how does a film work to cue our aesthetic responses?’

In this case neoformalism can certainly not be applied willy-nilly to an analysis of videogame violence. When I posed the question: ‘how does violence in single player videogames work?’ I certainly did not mean: how does it work to cue an aesthetic experience? While it is interesting to pursue questions about the aesthetic functioning of games, these would be rather different questions than the one I aim to answer in this thesis. While I will delve into this problem with neoformalism more thoroughly under discussions of defamiliarization in this chapter and the next, I should already state that I will suggest a rather significant reworking of the approach on this matter, before it can be properly used for a study of game violence. In that reworking, the main purpose of games as systems is to facilitate and structure play (see for example Salen & Zimmerman, 2004) rather than to cue an aesthetic perception. This means that asking how violence in games works is asking how it works to cue our play experiences in all its registers of constructing a narrative, progressing towards a game’s goal, drawing on notions of the real world, referencing other games or films, and considering artistic quality.

For the moment however, I should emphasize that neoformalism’s focus on function helps to base our analysis of game violence on a model that does not assume that form has the purpose of communicating meanings, or even the purpose of only structuring our configurative actions (see below). Instead, neoformalists

help to see that form triggers our responses more broadly, even if their aesthetic labelling of those responses must eventually be discarded for the purpose of this thesis.

For analytical convenience, neoformalists categorize the devices used for manipulating the film's material as either narrative or stylistic devices (Bordwell, 1985). This distinction should not be considered as a form-content split since neoformalists consider both categories to constitute the film's form. In other words, also the narrative is considered as a formal system made up out of different devices such as *bound motifs* which are necessary to push the narrative forward and *free motifs* which are unnecessary for the causal chain of events but may contribute an atmosphere to the environment or an identity to a character (K. Thompson, 1988). In this sense, neoformalists argue for a horizontal organization of devices, since they all are (a least in principle) equally important in their potential to cue our responses. As Bordwell (1985, p. 33) notices, narrative and stylistic devices interact with one another in every single case. So when watching a film, we arrange the events in a temporal sequence with the help of the cause and effect chain in the narrative, but our understanding is equally cued by the use of continuity editing.

For games, we can of course not suffice with only outlining narrative and stylistic devices. As interactive phenomena, games contain rules that create possibilities for performing motor actions, encourage certain actions over others through rewards or limit or discourage actions through punishments (see for instance Suits, 1978). Furthermore, as I will show in chapter 4, the narrative and stylistic devices in games often take on different forms and functions than in films, for instance by also playing a role in structuring the player's strategic decisions in a goal-directed process of gameplay. However, once we acknowledge the differences, neoformalism's horizontal organization of different devices does help us see how all devices can be equally important in structuring our play experience and escape an overemphasis on rules. For instance, our experience of a moment of game violence can depend on the way rules allow or force us to perform certain actions, the way those actions are framed as justified in the narrative, and the way those actions are presented graphically or from a certain point of view. Also here, these elements are all interacting in every single case in triggering a variety of different

play responses. For the purpose of analysis however, I will separate between these three categories in chapter 4 which helps us focus on either violent themed narratives, the stylistic means through which the violence is presented, or the rule-bound collisions between game entities and the potential reward of these collisions.

Because the function of a device can range from a role in the causality of narrative events to the cueing of a certain kind of viewer response, function is a very broad concept for the neoformalists. For instance, in Hitchcock's *Sabotage* (Balcon & Hitchcock, 1936) our attention is directed towards a sharp knife on the table during the dinner between Mr Verloc and his wife. In the causal chain of events the knife simply functions as a murder weapon. However, for the viewer, the knife also functions to trigger suspense. In this case the knife cues our anticipation of events to come. As soon as the camera shows us the knife we start to hypothesize future events involving the knife. Then, when the camera shows us Mrs. Verloc, our hypotheses get more finalized. The knife triggers our anticipation enough to start feeling suspense since it may potentially bring the tension between Mr. and Mrs. Verloc to a highly dramatic apotheosis.

Any device may thus have different functions that we can try to find by asking two kinds of questions: 'what is the device doing there?' and 'how does it cue us to respond?' (Bordwell & Thompson, 2004, p. 60). Different films may often use the same devices such as the use of split-screen or low key lighting. However, this does not mean that that device will always function in the same way. These devices are instead one of the 'hollow categories' of neoformalists that I referred to in the introduction of this chapter (Bordwell, 1989b, p. 381): they focus our analysis without determining how we should understand their functioning. Sometimes a split-screen may be used to indicate two interdependent events happening simultaneously thereby triggering suspense, such as in the TV series *24*. Other times the split screen may just be used to show both characters in a phone conversation. Furthermore, functions are highly dependent upon the context of viewing. For instance, a banana peel having a man trip and fall may once have served to cue laughter. However, these days the banana peel joke may only function to cue annoyance with the film's lack of originality.

As I will argue in the next chapter, neoformalism's idea of function is much broader than the function that ludologists argue for. With this broad conceptualization of function, we are again able to focus on a wide range of game elements, since rules as well as narrative and stylistic devices can all have important functions in cueing our play experience. Furthermore, this broader conceptualization of function also means that the play experience should be considered much broader than the configurative behaviour that the ludologists focus on, or the meaning construction that is of interest to the proceduralists. Instead, game devices can function to cue different perceptual, cognitive, behavioural and emotional responses, from the construction of a narrative, to devising a strategy or even having a feeling of awe over the beauty of a game environment. On this matter, a neoformalist analysis of game violence would explicitly move away from ludology or proceduralism whose narrower views of a game's functionality leave certain devices and play responses unaccounted for.

2.2.2 *Motivation*

To help identify the functions of a device, neoformalists consider the motivation for the presence of a device. Because neoformalists consider that a film is constructed by a maker, they assume that any device will have a reason for being there. The 'reasons for being there' are what neoformalists call motivations. These motivations do not equate to authorial intent. To consider the motivation of a device, the neoformalist only needs the assumption of agency behind the presence of a device. Eventually though, the motivations are drawn from the work itself by considering how a device functions in the overall structure of the work. This means that the motivation is not the justification given by the maker but the justification given by the viewer on the grounds of the work's functioning. By motivation, the neoformalists thus mean 'the reason *the work* [my emphasis] suggests for the presence of any given device' or 'a cue given by *the work* [my emphasis] that prompts us to decide what could justify the inclusion of the device' (K. Thompson, 1988, p. 16). Thompson (1988, pp. 16–21) divides these motivations up into four basic types:

- *Compositional motivation*: justifies the inclusion of the device for its creation of narrative causality, time and space.

- *Realistic motivation*: justifies the inclusion of the device for having the perceiver appeal to notions of the real world.
- *Transtextual motivation*: justifies the inclusion of the device for having the perceiver appeal to knowledge of genre conventions or other intertextual conventions (e.g. previous work by the same actor or the use of certain techniques such as the ‘cliffhanger’).
- *Artistic motivation*: justifies the inclusion of the device for its contribution to the work’s abstract, overall shape. This is probably the most difficult type of motivation to define. It would seem that the artistic motivation is often overshadowed by more prominent other motivations and it only really becomes noticeable when the other ones are withheld. Generally speaking, abstract stylistic devices that trigger non-straightforward (symbolic) meanings can be considered to have an artistic motivation.

For example, in a horror film the scene of a car breaking down in a dark and eerie forest is often motivated compositionally because the information creates narrative possibilities necessary for the horror film to achieve its effect (e.g. having to find shelter for the night in an abandoned cabin where the characters find a spell book that can awaken the dead). However, such a scene can also be considered for its realistic motivation since the stylistic device of low-key lighting may have us appeal to notions of how real forests can indeed be dark and quite eerie during nighttime.

Here, our notion of reality should not be considered as something truthful but rather, as something probable, based on aesthetic conventions of realism and our personal experiences with the everyday world. This means that I understand realism in both mimetic and conventional terms. While the focus on mimesis may seem somewhat contradictory to formalist discussions of realism, I believe the focus is necessary for us to experience anything as realistic since also conventions of realism are related to our knowledge of the everyday world. For example when Thompson, following Shklovsky, argues that we perceive a work as realistic because the work makes use of certain conventions that we associate with realism or, more importantly, because it diverts away from other familiar conventions that we do not see as realistic (1988, pp. 197–198), we could rightfully ask how those conventions

become associated with realism in the first place. Here, I follow Grodal who argues that ‘our experience of the everyday intersubjective world (...) still provides the norm in relation to which special represented phenomena are evaluated and characterized’ (2002, p. 88). This does not mean that a work is realistic when it shows some sort of natural transparent relationship with the real world. After all, as Smith states, ‘praising something for its ‘realism’ depends implicitly on recognizing that it is not of the same order as the thing imitated’ (1995, pp. 32–32).

All in all, Smith rightfully states that there is no reason to assume that a work cannot be both constructed according to its own conventions and still be mimetic (1995, p. 32). Or to put it differently, arguing that there is no natural/transparent relationship between an artwork and a real world does not mean that we cannot argue that there is not a conventional relationship between an artwork and a real world either. This means that a shooting scene in *Saving Private Ryan* (Bryce, et al. & Spielberg, 1998) can be realistically motivated since it adheres to filmic conventions that we associate with realism and because we perceive it as probable that such a shooting event could have occurred during World War II, not because that shooting scene actually took place. Furthermore, a shooting scene in *Predator* (Lawrence, et al. & McTiernan, 1987) is not (or at least less) realistically motivated since our knowledge of the real world tells us that predators do not exist.

The horror scene of a car breaking down may also have a transtextual motivation since we may know from horror genre conventions that a stranded car in a dark and eerie forest spells trouble ahead. We may not immediately notice these transtextual motivations when they fit our assumptions so well. However once our assumptions are violated or otherwise made explicit these transtextual motivations become really noticeable. Many ‘postmodern horror films’ like the *Scream* series for instance play with these genre conventions by having characters articulate them explicitly.

If the event would also show unusual camera movements or angles, or a surprising use of colour, our attention may also be directed towards those stylistic devices for their artistic motivation. In such a case these devices do not contribute to the narrative construction but draw our attention solely on the basis of their own interesting abstract form.

As I will argue in the next chapter, the different motivations that neoformalism considers also provide useful categories for the analysis of videogame devices. Certain cutscenes, for instance, are motivated compositionally because they drive the narrative forward. And in a war game like *Medal of Honor: Vanguard* (EA Los Angeles, 2007) the weapons that the player can carry are all realistically motivated. However, as I will argue more elaborately in the next chapter, elements in games are often predominantly ludically motivated because they are there to structure the player's rule-bound goal-directed progress in the game.

2.2.3 *The 'Dominant'*

Any film will have a plethora of different devices most of which will have different motivations for their inclusion in the work. Which devices are considered as the more important ones is largely dependent on what neoformalists call the *dominant*. As Thompson defines it: 'The dominant is a formal principle that controls the work at every level, from the local to the global, foregrounding some devices and subordinating others' (1988, p. 89). Because the neoformalists assume that the elements in a work do not coexist harmoniously but instead exist in a 'dialectic tension among them' (Steiner cited in K. Thompson, 1988, p. 90), they search for the more preeminent ones that are foregrounded and consider those to be the more important ones to discuss in their analysis of the work.

Thompson argues that this foregrounding can be understood in terms of an element's defamiliarizing capabilities (1988, p. 91). While I will leave a more thorough discussion of this concept until later in this chapter, this basically means that devices become more important once they are more effective at framing the represented thing in a way that is unfamiliar to us. This causes a more difficult perception of that thing and renews our understanding of it. In other words, the familiar bite-sized chunks in a film are considered less important, while the difficult unfamiliar elements become foregrounded as the more dominant ones.

This idea of the dominant is important for the neoformalists because without it they would need to analyse every single element with equal attention. Although most critics of course do intuitively distinguish between more and less important elements in a work, neoformalists make this choice explicit by systematically

showing how certain more unfamiliar devices run throughout the structure of the work subordinating the automatized ones to fit the dominant structure. This does not mean that certain devices are inherently more important than other ones. On the contrary, neoformalists start from the basic premise that all devices are equal in their potential to cue the aesthetic response. And it is only once the dominant is determined that certain devices are analysed as more important. In such an analysis however, the stylistic and narrative devices often provide equal support to the dominant and in doing so enter into a relationship that shows their equal status.

For a study of game violence, the idea of a dominant is both problematic and useful. It is problematic if we indeed equate the dominant to a game element's level of defamiliarization. As I already noted briefly and will explain more elaborately below, the main purpose of a game is not to make things unfamiliar again, but simply to facilitate and structure play. If we were to focus on those components that were more defamiliarizing, we would likely skip most of the violent encounters in games since those encounters are often rather automatized and repetitive. Furthermore, even less automatized moments of violence would mostly be interesting for the ways in which devices function to cue the defamiliarizing experience and not for the many other ways in which devices can also function to cue more automatized performances and perceptions of violence that can still frame that violence as ludically enforced and/or purposeful, important in the narrative of the game, realistic, or even referencing other cultural artefacts. In other words, if we equate the dominant to those elements that defamiliarize, we base our analysis on a rather narrow conceptualization of play and can only focus on those devices and functions cueing that narrow play experience.

For that reason, a new game formalism needs to rely on a broader conceptualization of play that goes beyond defamiliarization just as it goes beyond configurative activity (ludology), or interpretation (proceduralism). As I will argue more thoroughly in the next chapter, this broader conceptualization of play should include all the predispositions necessary for the game to achieve its effects in all its motivational categories, whether those motivational categories are indeed present in the game or not. Then game elements can become foregrounded once they are more essential for our progression towards the game's goals, for our construction

of the narrative, for an experience of realism, for our references to other cultural artefacts, and for our experience of the game's artistic shape.

Once we base the dominant on our basic will to progress, construct a narrative, experience realism, transtextual references, and artistic quality, the dominant becomes useful on two levels. On a holistic level, the dominant helps to focus on certain moments that are more important with a reference to the overall functioning of the game. When analysing game violence, we can then argue that certain moments of game violence are more or less important with regards to the overall ludic, narrative, realistic, transtextual, and artistic 'shape' of the game.

On a reductionist level, where we single out a specific game moment, the dominant helps to focus on the more significant motivations during that moment. When we analyse a moment of game violence, we could then for instance state that certain devices making up that particular violent encounter, serve an important ludic function while other devices serve a more important compositional one. As I will argue more thoroughly in chapter 5, the dominance of certain motivations can trigger certain types of perceptual, cognitive, and emotional responses to the violence. I should already note, however, that this does not mean that the different devices will always reinforce each other in one dominant experience but can also work against each other to cue a variety of experiences which can sometimes come across as rather contradicting.

2.3 The Roles of the Viewer

Even though neoformalism is an analytical approach to film systems rather than an analytical approach to viewer responses, the viewer still plays an essential role for the neoformalists. To a neoformalist, the viewer is not passive but active. The viewer comes to the film with certain viewing skills and background knowledge which contribute to the perceptual experience. As Thompson puts it:

The viewer actively seeks cues in the work and responds to them with viewing skills acquired through experience of other artworks and of everyday life. The spectator is involved on the levels of perception, emotion, and cognition, all of which are inextricably bound up together (1988, p. 10).

In this sense, it would seem that the viewer plays at least an important role in actualizing the game's effects. The viewer is a necessary component for the film's devices to function. Or to put it differently, a film's formal devices cannot function to cue a response if there is no one to cue that response in.

However, for a neoformalist, the response that is cued is of specific interest. This is because the neoformalist is not interested in any kind of response, but, as I already noted several times, specifically in an aesthetic response. It is this aesthetic response that functions as the basic premise for the neoformalist to do the analysis. In this sense, the viewer also plays another important role because it is due to his or her aesthetic response, which neoformalists term defamiliarization, that an analysis can take place. I will elaborate on these two roles in the following two subsections and already note some problems and potentials for the construction of a neoformalist approach to games.

2.3.1 *The Perceptual Activity*

With the viewer playing such an important role in actualizing the film's effects, neoformalists have some explicit assumptions about how the activity of perceiving the film takes place. By assuming that viewers will perform certain standard activities in response to a film's cues, the neoformalists claim intersubjective access to a film's devices but still allow for changes in perceptions among different views. In this sense, these assumptions are important for our consideration of a game's formal components, since they can provide a base for studying form while still acknowledging an active role for the player. However, before we can consider whether neoformalism's assumptions of an active viewer indeed provide a solid base for a consideration of an active player and a study of game form, we need to thoroughly interrogate the assumptions here.

According to the neoformalists, perception is an active process of forming hypotheses and testing them against the perceptual cues in the work. Thompson (1988, pp. 26–28) sees this process taking place across three different levels (not counting the unconscious level which she denounces as an 'unnecessary construct' for the neoformalists (1988, p. 27)). At the lowest level, the viewer engages in *physiological* processes such as perceiving moving images from the rapid display

of static film images, hearing music from a series of sound waves, differentiating colours, or seeing shapes. Thompson refers to these processes as physiological because they occur automatically without a conscious awareness of the viewer. We cannot help but see movement on the screen. And there is no way to make ourselves aware of this process through introspection since it happens as a kind of involuntary reflex. Bordwell (1985) calls these processes ‘bottom-up’ since the work is in charge and forces a certain response onto the viewer thereby creating the appearance of movement or music. Thompson (1988) argues that this perceptual level is of little interest to the neoformalist analyst since it is so self-evident. Instead, she suggests to focus on the two higher levels of perception.

One level up from the lowest level processes, the viewer engages in what she calls *preconscious* perceptual activities. These preconscious activities are ‘nearly automatic’ in the sense that we can come to a realization of how we came to see continuous action over a scene cut up into different shots, but because we have become so familiar with these techniques we do not need to think about them consciously. This perceptual activity thus relies on internalized viewing skills that allow us to process certain perceptual cues relatively effortlessly. Bordwell (1985) argues that these processes do however operate ‘from the top down’ since our recognition of certain familiar elements is determined¹⁴ by our hypotheses. In those cases, though, the film’s cues confirm our hypotheses which means that we are not required to exert much more conscious cognitive effort to revise them. Many of the stylistic devices such as continuity editing, point of view shots, or the use of non-diegetic sound, are all so familiar to us that our processing of them can be

¹⁴ As I will argue below, this is where I see the biggest problem with neoformalism. By arguing that the processes of comprehension and interpretation are *determined* by our application of conceptual structures, the approach becomes self-contradicting because it no longer allows for an analysis based on objectively existing, ‘response-structuring’ material. A better formulation here would then be, ‘initiated’ rather than ‘determined’, thereby leaving the work to eventually still give the final say.

considered preconscious. Similarly, when we recognize certain objects or events, we do so preconsciously.

At certain moments, however, we struggle to understand certain stylistic techniques or recognize narrative events or character traits. During those moments we go through *conscious* perceptual processes to make sense of the cues in the work. On this highest level of perception our hypotheses, assumptions, and expectations are continuously tested and require revisions so we can make sense of the work's cues. Thompson (1988) argues that this level of perception is usually the most important one for the neoformalist analyst. This is because it is during these moments of conscious perception, that the film challenges our habitual day-to-day perception most strongly, which, as I will argue below, neoformalists consider as an artwork's main purpose.

Thompson derives these three levels of perception from Bordwell's constructivist model of film spectatorship. According to this model, which Bordwell himself derives from a more general constructivist theory in perceptual and cognitive psychology, viewing is an active process where the viewer makes *inferences* about the perceived thing on the basis of clusters of knowledge called *schemata* (Bordwell, 1985, p. 31). As Bordwell explains, we have schemata for many things:

The mental image of a bird is a schema for visual recognition, and the concept of a well-formed sentence functions as a schema for speech perception. Schemata may be of various kinds – prototypes (the bird image, for instance), or templates (like filing systems), or procedural patterns (a skilled behavior, such as knowing how to ride a bicycle) (1985, p. 31).

These schemata guide our hypotheses that we test against the cues in the work, which allow us to make perceptual inferences about the work. This concept of inference is essential for Bordwell because it illustrates the incompleteness and ambiguity of the sensory stimulus that requires the viewer to infer his understanding with the help of pre-existing knowledge. In doing so, Bordwell argues, the viewer enriches the incomplete stimulus with his schemata. So, instead of seeing a pink shape with a black stripe, we see a man's face with a moustache, and instead of encountering a set of random events, we construct a story out of it. On top of that,

Bordwell argues that the film viewer also constructs off-screen space or space between different shots not shown by the film's cues at all.

At first glance, these constructivist ideas seem to provide an interesting way of thinking about the role of the player. Also games, as Klastrup has argued, remain 'in potentia' until actualized by a player's actions (2003, p. 102). So, through his actions, the player significantly enriches an otherwise incomplete and ambiguous stimulus. In fact, in games, this enriching can go far beyond what Bordwell seems to argue for. Due to the interactive nature of games, players do not only enrich the game perceptually and cognitively, but also behaviourally. Instead of constructing events between different shots, players will thus have at least some degree of influence over how many of the on-screen events will play out in the first place. However, this also causes problems if we wish to study the formal components of game violence. After all, how can we still study the formal components of game violence if that game violence is dependent on the player's perceptual, cognitive and motor actions?

Unfortunately, Bordwell's constructivism is unable to provide an answer here. In fact, I believe that his constructivist ideas on film viewing run him into a similar problem when studying the formal components of films. As also Gaut (1995) and Thomson-Jones (2009) have noted, this problem occurs because Bordwell does not merely argue that film viewing is a constructivist process where viewers test hypotheses against film material (potentially enriching the perceived beyond what the sensory cues provide), but also that the viewer's schemata and formed hypotheses determine the perceived, thereby turning the perceived into a construct of the mind (Bordwell, 1989c). As Thomson-Jones criticises Bordwell, 'the fact that perception is an active, inferential process does not mean that the objects of perception – namely the things we perceive around us – are constructed' (2009, p. 139). In that case, a neoformalist approach that relies on objectively existing film material structuring the viewer's responses is indeed directly contradicted by a constructivist approach to film spectatorship where this material is constructed by the viewer.

To be charitable to Bordwell here, there is more ambiguity in his argument. Bordwell explicitly states that he does not argue for a constructivism in the

epistemological sense where also the stimulus becomes a construct but rather for a ‘constructivist realism’ where we are able to make approximately true inferences (Bordwell, 1989a, n. 8, 1989c, n. 9). Here, his argument again gravitates towards more formalist ideas where, as Bordwell himself puts it: ‘the film presents cues, patterns, and gaps that shape the viewer’s application of schemata and the testing of hypotheses’ (1985, p. 33). However, these statements are directly undermined by many of his other claims. Bordwell for instance explicitly argues that ‘the organisation of sensory data is primarily *determined* [my emphasis] by expectations, background knowledge, problem solving processes, and other cognitive operations’ (Bordwell, 1985, p. 31). In other words, what we see depends greatly on our (un)conscious choice of cognitive concepts. This also means that for Bordwell, ‘meanings are not found but made’ (1989c, p. 3) making a film inherently polysemic. While this claim may suggest that it is only meaning that is constructed, which may be considered more plausible than the idea that the viewer constructs a much broader set of formal components, I believe Bordwell’s argument can be extended to incorporate other (stylistic and narrative) devices in films as well. After all, Bordwell explicitly argues that even the process of recognizing sensory data and comprehending stories is *determined* by our schemata (1985, pp. 31–32) and in their collaborated work Bordwell and Thompson state that ‘form is the total system which the viewer *attributes* [my emphasis] to the film’ (2004, p. 50).

As I have argued above, neoformalists base their analyses largely on the material cues that are there in the work. Although these cues are eventually perceived with the use of background information, this background information is already implicit in the material cues of the work. However, when Bordwell argues that not only viewing a film for its meaning or formal elements is a constructive process, but also that the meanings and forms are constructs, he denies an existence of those material cues independent of the viewer’s perceptual processes which is what the neoformalists rely on for their intersubjective access to the film. While Bordwell’s solution to this problem lies in his suggestion for a ‘constructivist realism’ where the viewer can come to inferences that are approximately true, there are still two problems with it.

First of all, Bordwell (1985, p. 62, 1989c, p. 270) and also Thompson (1988, pp. 7–13) explicitly reject any communication from the screen to the viewer. However, as Redfern explains, if we're able to infer information from the film's formal devices, such as a story from the shuzyet, there must be some sort of 'communication of meaningful narrative information from the screen to the spectator' (Redfern, 2005). Although Bordwell does discuss the concept of 'communicativeness', which he explains as the degree to which the film shares information that the film's degree of knowledge allows for (Bordwell, 1985, p. 57), it remains unclear how a film can be more or less communicative without the communication of information from screen to viewer.

Secondly, Bordwell's suggestion for a constructivist realism hollows out the idea of constructivism since constructivism, in its epistemological roots, relies on the idea that we cannot come to any truth claims since also so called 'facts' are '*constructs based on regularities in a subject's experience*' (Redfern, 2005). As also Redfern (2005) explains convincingly, you cannot claim to be a constructivist but stick to the idea that your knowledge can approach an independent reality since constructivism is built around the idea that there is no way of knowing that independent reality outside of your own experience so there is no way of knowing whether our knowledge reflects it.¹⁵ In other words, you cannot have your cake and eat it.

Here then, I propose a rather significant reworking of neoformalism to keep it from contradicting itself and to provide a better base for considering the formal

¹⁵ Redfern critiques Bordwell's constructivist realism from a radical constructivist argument and shows how Bordwell's claims are indeed untenable from a constructivist point of view. However, where Redfern proposes to substitute Bordwell's constructivism for a radical constructivism where the viewer does not test his perceptions against the cues in the work but rather against his own experiences in perceiving the work, I suggest here (see below) that neoformalism's claims are better off relying on a communications model of art.

components of game violence while still acknowledging an active role for the player. This altered neoformalism entails a neoformalism that does not rely on Bordwell's constructivist ideas of film perception. Instead, this neoformalism makes amends with the idea of a 'communication model of art' that Thompson and Bordwell have so firmly rejected. Once we acknowledge that the film still 'communicates' certain narrative and stylistic 'information' to the spectator, neoformalism can again rely on a work existing independently of the viewer that significantly guides the viewer's perceptions. And while the viewer still engages in hypothesis testing and inferences making, he does not construct the film's form.

Here, I partly align with Gaut (1995), who argues for an approach to film perception in which the viewer can be seen as a detective who tests background knowledge against existing clues to make sense of the work. Sometimes those clues may paint an incomplete picture which means that the viewer is required to fill in the gaps (e.g. off-screen space or 'in-between events'). However, Gaut argues that also in those cases, the film (not the viewer) gives clear cues about what the viewer ought to imagine (1995, pp. 15–16). While I agree with Gaut's main points here, he is specifically focused on finding meaning in a work, rather than on finding a broader range of formal components. This is problematic because it suggests that meaning conveyance is again the main purpose of a film which is exactly what the neoformalists tried to avoid by abandoning the communications model of art in the first place (K. Thompson, 1988, pp. 7–13).¹⁶ After all, neoformalism has clearly positioned itself as a poetics interested in the functions of film devices more generally rather than in the meanings that they express. For this very reason we should be wary when reinstalling a 'communications model of art' in a neoformalist approach. When I argue for a neoformalism based on a communications model, I

¹⁶ The other reason that neoformalists jettison any communication model of art (whether that model is a classic sender-message-receiver model of communication or an encoding/decoding model of communication), is of course to argue for a metaphor of construction rather than interpretation (Bordwell, 1989c).

do not mean to turn neoformalism into an approach that considers films for the meanings that they communicate. Instead, I simply wish to emphasize that the film's material is there independent of the viewer's perception of it, and that the material is manipulated with a range of different devices which trigger the viewer to have a certain aesthetic, non-practical response. In this sense, the film should still be considered communicative because it sends information from the screen to us. Here, I consider the trigger to be that information, and the devices as the source transmitting the trigger.

Finally, I should emphasize that abandoning Bordwell's constructivism and installing a communications model in neoformalism is not about preserving some sort of objectivity about meaning. Instead, arguing against constructivist film perception is simply a way of allowing intersubjective access to one and the same film and all its materials and devices. Different film viewers may still end up having different kinds of responses to the film's devices, but in order to study those devices we need to acknowledge that those devices exist independently of the viewer and communicate from the screen to the viewer.

Clarifying my stance on this matter is essential for the study of videogame violence since it provides us with a more solid base for further questions about the role of the player in the game's violence. When players are considered to construct the game through their play behaviour, game violence becomes a highly subjective matter that only exists as a player's individual performance. However, when the game is seen as a guiding force existing independently of the player, it could be argued that the player merely activates violence (in one of various ways) that is already existent in the system. This distinction does not only hold consequences for the way that we can approach game violence, but also raises questions about the responsibility of the player in acting out the violent behaviour.¹⁷ The role of the

¹⁷ By this I mean that the player only plays one part in the production of game violence, not that the player should therefore also be held only partially accountable for his actions. Although

player of course requires a lot more scrutiny since the interactive nature of games makes issues around intersubjective access to game violence all the more pressing. In the upcoming chapters I therefore aim to show how games indeed play a highly structuring role in the construction of game violence by encouraging or in fact forcing the violence to be performed and encouraging certain perceptions of that violence. We can then study moments of violence for the different ways in which different devices cue our responses, and also focus on a limited set of formal devices according to their dominance in the overall functioning of the game.

2.3.2 *Defamiliarization*

As a basic premise, neoformalists assume that the act of perceiving an artwork is significantly different from our normal day-to-day act of perceiving the world around us. They argue that our day-to-day perception serves a practical purpose; it is a means to an end. We perceive elements in our environment mostly for the purpose of achieving our set goals. This means that elements in our environment that do not contribute to our practical goals are kept peripheral. As Thompson puts it:

We perceive the world, so as to filter from it those elements that are relevant to our immediate actions. Standing at a street corner, for example, we may ignore a myriad of sights, sounds, and smells, focussing upon a small traffic signal for the moment when it turns green, indicating that we may proceed toward our actual goal, an appointment a few blocks beyond. For such purposes, our mental processes must be focused down, factoring out other stimuli. If we noticed every perceptual item within our ken, we would have

acknowledging the structuring role of a game's material may certainly lead us to question a player's accountability, it seems to me that answering such a question also requires a consideration of the player's understanding of his violent act as well as his voluntary decision to play the game.

no time to make decisions concerning our most pressing needs, like not stepping out in front of a bus (1988, p. 8).

On the other hand, when viewing a film our perceptual processes are not focused down for practical purposes but employed more freely, allowing for perception of things that would otherwise be filtered out. During these moments we engage in a different type of perception that is non-practical which means that perception is no longer the means to an end but the end goal itself. Because the film holds ‘no immediate practical implications for us,’ we engage with the film in a more ‘playful’ way which trains us to see things in a new light (K. Thompson, 1988, p. 8).

So, when we see a guy with a gun on the screen, or when we witness injustice, we cannot act on it, leaving us in a helpless situation where we can only perceive for the sake of perceiving. Consequently, our perceptions can be more dispersed, allowing us to incorporate a wider range of perceptual stimuli. We can come to see the details of the gun, or the details of a facial expression. Furthermore, we can also cognitively process the stimuli for more than the immediately practical action affordances. In that case, the gun can also become a thing of beauty rather than a threatening object.

At first glance, Thompson’s claim for non-practical, playful perception in films does not seem to apply to games. After all, games are interactive media that *do* allow for the execution of actions. In this sense, it could be argued that a player’s perceptual resources are indeed focused down for the execution of appropriate actions rather than dispersed to account for a broader range of perceptual stimuli. However, such a conclusion would be too hasty in light of the fact that our play activity is more heterogeneous than perceiving for action. While the ludologists indeed argue that the configurative activity is a priori the most dominant one which would entail that we perceive for the purpose of performing actions, I will argue in section 3.3.1 (and beyond) that a player’s activity can be considered to exist on an axis between pure spectatorship and pure agency. In that case, the combinations of different cues and their functions encourage what kind of activity dominates during a particular play moment.

Because our roles as spectator and agent involve different perceptual, and as I will argue in chapter 5, also different cognitive and emotional focus points, our experience of the game's violence can be very different depending on the kind of player activity that the game cues. In line with Thompson we could for instance argue that a more dominant role as agent has the player focus down on those game elements that are of immediate relevance for his or her progression towards the game's goal. On the other hand, a more dominant role as spectator has the player disperse his attention towards other elements in the game and evaluate them for other roles they have in the play experience.

Furthermore, similar to how Thompson characterizes film viewing, so is play often characterized as having an aim in itself which distinguishes it from more practical behaviour in daily life. Here, I link up with Apter (1991) who calls this characteristic of play 'paratelic' which he distinguishes from a telic state of mind where an outside goal provides the main motivation for the activity. While the player can still strive for goals during gameplay (which is exactly why players can also be agents in games), these goals still function in service of the play activity (Apter, 1991, p. 16). In other words, these goals make playing the game possible. Even an extrinsic goal like winning a trophy or an achievement can be said to function in service of the game since these encourage meaningful play behaviour. It is only when the goal becomes more important than the game, that play is no longer intrinsically motivated which also means that for Apter gamblers and professional athletes are often not playing.

This paratelic characteristic of play shows similarities with Thompson's claims about film viewing as an end in itself. However, there is a clear difference between games and films in this matter. Where games do not provide the player with a practical objective outside of the game's objectives to facilitate play as intrinsically purposeful actively, neoformalists argue that films are free of practical implications to facilitate a process called *defamiliarization*. Borrowing the term from the Russian formalist Shklovsky (1917/1965) (who used the Russian language equivalent 'ostranenie'), Thompson (1981) argues that the main function of the film is to make objects 'unfamiliar' again. By removing immediate practical implications of the perceived actions, the film allows us to see those actions differently from the way

we would see them in our daily lives. This non-practicality is the first step towards defamiliarization since we see actions in a context that is unfamiliar to us. However, the non-practicality also creates the basic condition for further defamiliarization to occur. In that case the film can further challenge our habitualized perceptions by placing the represented events in new contexts and showing them in unaccustomed formal patterns (K. Thompson, 1988). This makes perception a more difficult and lengthy process and renews our perception of the things represented.

Defamiliarization is not only dependent on the cues in the work but also on the backgrounds that viewers bring to the work. Certain elements in a film may become habitualized over time due to repetitive use. In those cases, our perceptual process may again fall back into mindless ease and the defamiliarizing devices will have lost their effectiveness. The violence in *Bonnie and Clyde* (Beatty & Penn, 1967) for instance, has now become a rather familiar sight to us. At other times, however, older films will again be effective in defamiliarizing our perception because the new generation of audiences will have attributed a new historical background which makes the work feel unfamiliar again.

In principle, defamiliarization thus becomes a tool to judge the artistic quality (the artfulness) of a work. Following this principle, one could argue that the more the film is able to defamiliarize our perceptions of the everyday world or other artworks, the better the artistic quality of that film is. This does not necessarily mean that only highly original 'arthouse' films should be considered as art. After all, all films remove practical implications from our perceptual engagement with them, which already provides a context that is different from our everyday lives. As Thompson puts it: 'even in a conventional work, the events are ordered and purposeful in a way that differs from reality' (1988, p. 11). However, defamiliarization does come in different degrees with certain conventional films being less defamiliarizing than more original works. So, in principle highly defamiliarizing works could be considered as better artworks than the less defamiliarizing ones.

In practice, however, the concept of defamiliarization functions rather differently. In fact, I do not believe that either Thompson or Bordwell have ever offered such a crude evaluation of a film. Instead, neoformalists use defamiliarization more as a

basic premise for doing analyses. As I have argued briefly in section 2.2.1 the task of the neoformalist is then identifying those formal components and the implied backgrounds whose interplay function in bringing about the defamiliarized perceptual experience. Or, put differently, as a poetics of cinema, neoformalism bases its analysis on defamiliarization as the film's main effect and then tries to find out what devices are functioning to cue that effect to a greater or lesser extent.

Defamiliarization is probably the most problematic concept of neoformalism when we aim to use it as a basis for constructing a neoformalistic approach to videogame violence. While neoformalists see defamiliarization as the main purpose of films, thereby considering all films for their artfulness, I am reluctant to presume a similar purpose for games. The main purpose of games is not to defamiliarize our perceptions of reality or other games, but instead to facilitate and structure play. If we were to base our analysis of game violence on an experience of defamiliarization, we run into two essential problems. First of all, while the practical use of defamiliarization may be different, the basic principle of the concept still allows for normative judgements about the artfulness of the object of study. Although I am not arguing that games are not art (there is a good argument to be made for why they are, see for instance Tavinor, 2009a), I am arguing that the question of games being art is of no use for the current study of violence in games.

Secondly, as I argued above, basing our analysis on defamiliarization forces the focus on the unfamiliar rather than the automatized which would lead a lot of game violence unaccounted for in our analyses and determine our analyses towards those devices that are functioning to cause a sense of defamiliarization. However, also other functions that lead to more automatized responses can most certainly frame the violence in interesting ludic, compositional, realistic, transtextual and artistic ways.

I therefore argue in the next chapter that, instead of defamiliarization, *play* can function as a similar premise to build our analyses on. Instead of identifying the formal components and implied backgrounds that bring about a more or less defamiliarizing experience, we then look for the devices and implied backgrounds that shape our play experiences on all accounts of ludic progression, narrative construction, realism judgements, transtextual references, and artistic experiences.

In this case, devices and motivations become significant in relationship to the different predispositions we bring to the game that are necessary for the game to achieve its effects in all the different motivational categories. With this in mind, a study of game violence can build upon our broad experience of play and still remain focused on the ways in which the material of the system functions to cue that experience. In my suggestion for a neoformalism in game studies, such an adaptation of film neoformalism will be explored further in the next chapter.

2.4 The Film in Historical Context

As briefly argued in section 2.1, neoformalists see the system as grounded in reality and in relationship to other artworks, which means that a viewer's knowledge of reality and other artworks become important factors in the perception of the work. This idea marks a clear difference with New Criticism that assumed the system as purely self-contained and self-referential. Neoformalists argue that such a view is untenable because without a reference point in the real world or in other artworks, the viewer would be unable to make any sense of the film. After all, how would we understand what we were seeing if the film showed no similarities with, or deviations from our everyday world? Presumably watching a film like that would be like listening to a an unknown foreign language; it would be complete gibberish to us (K. Thompson, 1981).

When neoformalists argue that the artwork is grounded in reality and in relationship to other artworks they mean two things. First of all, they consider the artwork to be affected by the circumstances of its creation because it is constructed with material grounded in that work's historical context. This focus on history is important because it helps the analyst assume that the film is a result of a filmmaker's choices who then sees it as his task, as Bordwell puts it, 'to reconstruct the options facing [the] filmmaker at a given historical juncture' (1989b, p. 373). Bordwell calls this a '*rational-agent* model' of analysis which he suggests to combine with an '*institutional* model' of analysis that also takes into account the social and economic context that permit and constrain the filmmaker's choices during a certain time (1989b, pp. 382–383). Such an analysis does not constitute a study of authorial intent but focuses on the film in question and tries to reconstruct the circumstances of its creation through additional research into the film's historical context.

Such an analysis could for instance provide an interesting take on a game like *Death Race*. By placing the game in its historical context, we can come to see how its making was constraint by existing game engines with relatively simple collision physics. But we can also come to see how this game broke some social conventions by playing into the controversies surrounding the film *Death Race 2000* during a time when arcade games were mostly seen as colourful children's toys. Such models can thus help us explore the history of violent videogames as restraint by technological boundaries and a fluctuating movement of game designs either challenging or agreeing to social conventions thereby leading to more or less original works.

A second consideration that results from placing the work in reality and in relationship to other works is more reception oriented. Where the 'institutional' and 'rational agent' models assume that the production of films is affected by the circumstances of its creation, this one holds that the perception of the artwork is also affected by the circumstances of its viewing. Bordwell refers to this model of analysis as the '*perceptual-cognitive* model' (1989b, p. 383). It is this model that helps us describe and explain the perceptual, cognitive and emotional processes that viewers go through when watching a film. As I have already argued elaborately in the previous sections, this model assumes that viewers bring backgrounds to the film which help viewers recognize elements in the film or detect complex and original elements of the film because they deviate from those backgrounds.¹⁸ However, in addition, neoformalists also emphasize the historical nature of those backgrounds since viewers will slowly adopt different norms over time (Bordwell,

¹⁸ As I have argued above, neoformalists assume that all devices will have a reason for being there which allows them to consider devices that challenge viewing norms as the more significant ones. However, such an assumption does rule out the possibility of a mistake. I would argue, however, that mistakes such as clear continuity flaws will not likely be considered as the original elements of the work since they go against the dominant structure of the work.

1989b). This allows neoformalists to account for changes in the responses of viewers during different moments in history.

To explain this, Thompson (1988) takes the interesting example of *Bonnie and Clyde*. She notes that when *Bonnie and Clyde* came out, it (and more particularly its trailer) stirred controversy amongst audiences due to its excessive portrayal of violence. Both the graphical representation of injuries and the use of slow motion meant that the film's stylistic devices were manipulated for an aestheticization of violence (see Bruder, 1998) that was unprecedented in its time. However, nowadays the film's graphics appear quite tame in comparison to many current day action films and the slow motion does not emphasize the violence half as much as for instance the slow motion in a more recent film like *Dredd* (Garland & Travis, 2012). This shows that with changing backgrounds the perception of the film can change significantly over time.

Placing the work in a historical context also has specific implications for how neoformalists conceptualize the viewer. The viewer is not considered to be an 'ideal' viewer who always performs the same activities in service of the work, since that would leave it impossible for different backgrounds to result in different viewings. However, neither is the viewer considered an actual person whose personal background leads to an idiosyncratic viewing of the film, since that would detach the viewer from his historical context where certain established norms are considered to be shared by a large group of viewers. For neoformalists the viewer is a construct suggested by the film's perceptual cues who takes form in the backgrounds that the viewer would reasonably draw upon to come to his understandings of the film (K. Thompson, 1981, p. 15). In other words, the viewer is a 'hypothetical entity' that does not exist as wholly in the work but as a reference point outside of the work which allows the viewing responses to change in accordance with the historically defined backgrounds applied to the work's cues (K. Thompson, 1988, p. 29).

Although varied, the backgrounds that this hypothetical viewer draws upon can be divided into three general categories (K. Thompson, 1988, p. 21). First of all, the viewer draws upon knowledge from the *everyday world*. This background is necessary for our recognition of anything with a reference to the real world and

without it we would be unable to understand much about character behaviour, three dimensional spaces, or many of the events of cause and effect. Secondly we use knowledge of *other artworks* to understand general conventions of artworks, which allow us to follow plots, understand a cut up space into different shots as one coherent whole, or recognize verses and choruses in musical numbers. This type of background is probably the most interesting one with regards to many of the formal devices of the artwork since our understanding of a lot of fictional narrative events as well as most stylistic devices is largely dependent on this background. Finally, we also view films against our knowledge of films made for *practical purposes* such as advertisement or rhetorical persuasion. This background is not very explicit but functions more as an implicit backdrop that the viewer must recognize in order to acknowledge the artistic manifestations of cinema as something that does not serve some external purpose but is purposeful in its own right.

So, in summing up, backgrounds have three important functions for the neoformalists. First of all, the neoformalist can account for the viewer's ability to understand the film through a process of comparing the film's cues with backgrounds taken from the real world, other artworks and other, more practical uses of cinema (K. Thompson, 1988, p. 21). Secondly, considering backgrounds as historical constructs helps the neoformalists to gain intersubjective access to a specific film's formal devices by drawing on the a collection of norms during a certain period of time. It should be emphasized here again that neoformalists are not so much interested in making generalizable claims about how actual people will perceive the film. Instead, neoformalists draw upon a historically limited amount of background information and uses that information as it is implied by the film only as a way to study the film's form and functions. Finally, the fact that backgrounds are historical constructs also helps neoformalists to account for changes in perception of a film over different periods in time.

The neoformalist idea of backgrounds as historical constructs helps to further refine an approach for an analysis of the formal components of game violence. In such an approach, the player is still important in performing and perceiving the violence but does so by drawing from information that is available during a specific moment in time. This allows us to see how certain perceptions and actions can change over

time, but still draw upon a limited amount of information to gain access to the game's formal cues. For example, when we now play a session of the first *Mortal Kombat* we will not likely be shocked by the highly pixelated representations of deaths even though the game sparked a big controversy at the time of its release because of the realistic representations of violence. An analysis of the game's graphical quality therefore needs to account for the current state of game graphics which already limits our perceptions. Similarly, the invention of rocket-jumping where players are able to jump higher and reach new areas by firing a rocket launcher at the ground and jumping at the same time, may be considered as exemplary of the processual nature of games (Malaby, 2007). However, by considering backgrounds as historical constructs, we can still consider the game as a system and this new playing strategy simply a matter of gaining new available information about how to play the game. At this point in time, we should therefore keep this newly available strategic information in mind when studying the way that the rules of *Quake* allow for violent actions.

2.5 Conclusion

This chapter has provided an extensive discussion of the neoformalist film approach so that the next chapters can start to explore the usefulness of its basic assumptions for a study of games and a study of game violence more specifically. Such a discussion is important because we do not want an analysis of game violence to be based on sloppy or even self-contradicting foundations. As Thompson herself puts it: 'if we examine our assumptions, we have at least a chance of creating a reasonably systematic approach to analysis' (1988, p. 3).

As argued in section 2.2, the neoformalist film approach is an approach that aims to study the film work itself. However, rather than wanting to expose different materials of a film, the approach is more interested in studying the ways that certain devices manipulate these materials to cue our viewing experiences. In this sense neoformalism can be considered a functionalism, or better yet, a poetics of cinema because the interest lies in the way that formal devices function to cue certain perceptual, emotional, and cognitive effects, not in the material as such, nor in what the film means.

By assuming that a film is crafted by a maker who has reasons for including the devices, neoformalists provide four types of motivations, which help to consider the different functions of a device. These motivations include:

- Compositional motivations: when a device helps to cue narrative construction.
- Realistic motivations: when a device refers to notions of the real world.
- Transtextual motivations: when a device refers to other works and genre conventions.
- And artistic motivations: when a device contributes to the abstract shape of the film.

Since films will have many devices which can have any combination of these motivations, the analysis risks becoming overly broad. For this reason, neoformalism provides the concept of the dominant to focus on the more unfamiliar elements in the work.

As I will show in the upcoming chapters, these motivations can also be considered as useful categories for considering the functions of devices making up videogame violence although they need to be supplemented with an additional motivation that covers the role of game devices in facilitating goal-directed play. Furthermore, the concept of the dominant requires some significant changes before it can help to tease out the importance of certain devices and motivations in games. Rather than limiting our analysis to the more unfamiliar devices, I will suggest to focus on the ways in which devices can be more or less important for our play responses in all motivational categories.

Because neoformalists are interested in the ways in which certain devices function to cue our viewing responses, they also provide specific assumptions about that viewing response and the role of the viewer in it. As I showed in section 2.3, neoformalists depart from the idea that our film viewing responses are aesthetic responses since they serve no other purpose outside of the perceptual act itself. The non-practicality of the viewing experience forms the basis for a process they call defamiliarization, since we start to see the film's events in an unfamiliar, unpractical light.

While defamiliarization could theoretically be used as a tool to judge the artistic quality of a work (i.e. more defamiliarizing is better than less defamiliarizing), neoformalists use the concept more as a basic premise for doing their analyses. This means that the neoformalist starts with the assumption that the film cues a defamiliarizing experience and then tries to find those devices at work in cuing that experience. In this sense, defamiliarization focuses the analysis towards elements that the neoformalists find more important. These elements are considered part of the work's dominant.

However, defamiliarization does not happen solely due to the film's devices but occurs in the relationship with the viewer's background knowledge. Here the neoformalists ascribe an active role to the viewer who tests certain backgrounds against the devices in the film system. The neoformalists explain this active viewer role through a constructivist model of film spectatorship. However, this is where my main criticism of the approach lies. As I argued extensively in this chapter, the constructivist model does not mesh well with the idea that we can gain intersubjective access to a film's formal devices and their functioning by performing the appropriate perceptions implied by the film. After all, the constructivist model assumes that our background knowledge determines what we perceive, which also means that we can have no access to the formal devices outside of our own experiences. Or, put differently, in a constructivist model a film cannot be studied in terms of its formal devices but only in terms of our own backgrounds and perceptual operations.

While Bordwell tries to make his way around this problem by arguing for a 'constructivist realism', this hollows out constructivism's basic premise that we cannot know reality outside of our own experiences of it. For these reasons I argued for a significant modification of neoformalism by reinstalling a communications model of art. This model fits well with the idea that a film's devices 'communicate' to us from the screen and trigger our perceptual responses although we should be wary not to turn neoformalism into an approach focused on films as containers for meanings. By acknowledging this we can indeed have intersubjective access to the film's devices, which is what the neoformalists aimed for in the first place.

In this reworked version of neoformalism, the viewer still tests certain backgrounds against the communicated cues. However, the devices that are cueing, are considered there independently of the viewer and tell us what background knowledge is more or less appropriate. This does not mean that neoformalism argues that all viewers will perceive the work in one particular way, nor does it mean that the more appropriate viewings are considered fixed. After all, viewer's backgrounds still play an essential role in the viewing experience, which means that it is very possible (even likely) that viewers with different backgrounds will perceive the work in different ways. However, a neoformalist would argue that a limited set of those perceptions are appropriate according to the functioning of the film's devices, and decides to focus on those appropriate ones. Furthermore, as I argued in section 2.4, the neoformalists argue that the appropriate viewings will likely change over time since backgrounds consist of a collection of norms during a specific moment in time. Hence, the appropriate perceptions of *Bonnie and Clyde* now is very different from the perceptions of *Bonnie and Clyde* when the film was first released. However, the fact that backgrounds are historical constructs again allows neoformalists to make some generalizable claims about the appropriate viewings during a specific period in time.

Based on this exposition of neoformalism, I would argue that the approach provides a range of interesting focal points that, with some obvious adaptations and extensions, can carry a fully fleshed out neoformalist approach to videogame violence that takes into account a broader range of devices and functions than ludology or proceduralism allow for. As I will show in the upcoming chapter, the four motivation categories help to consider different functions that violence-related devices can have, but the categories will need to be complemented with an additional motivation category that covers the way devices can also facilitate and structure a configurative gameplay activity. Furthermore, I will argue that the idea of the dominant helps us tease out more and less important moments of violence and more and less important devices and motivations during a particular violent encounter. However, before that can happen, we need to dispose of the tricky and normative concept of defamiliarization as a base for undertaking the analysis and replace it with a broad conceptualization of play. Finally, neoformalism's consideration of the viewer as active participant who is nevertheless cued to

perform appropriate perceptions, forms an interesting starting point for considering the complex role of the player when one is trying to study a game's formal components. These, then, are the challenges that lay ahead in the upcoming chapters.

Chapter 3

A New Game Formalism

3.1 Introduction

As outlined in the previous chapter, neoformalism approaches films as systems and studies the ways in which different devices in such systems function to cue our responses. In principle, the broad understanding of function (identified through different motivational categories), and the equal consideration of different devices, make neoformalism an interesting framework for the construction of a new formalist approach to videogames. As I argued in the introductory chapter of this thesis, there is a need for such a new formalism in game studies if we want to come to a balanced consideration of the many different functions that devices making up game violence can have. Such a new formalism should be capable of considering all of these different devices and functions, and not just focus on the rules or the ludic functions, or on subordinate functions to finding meaning. In fact, I believe that, if outlined well, the basic assumptions of such an approach, should allow further generalization to constitute a more general approach to videogames, rather than an approach to game violence in particular. For this reason, I will side-line the violence issue in this chapter, to enable a broader discussion around the weaknesses of available formalisms and the ways in which neoformalism may provide some starting points to construct a more inclusive formalism in game studies. The question around game violence will be picked up again in the next chapters where I will use this approach to investigate different devices and motivations during play, taking moments of game violence as examples.

However, if we are to consider neoformalism as a blueprint for a new formalism in game studies, some significant changes must be made. As I briefly outlined in the previous chapter, neoformalism's concept of defamiliarization focuses the analysis on the more unfamiliar and thereby 'artful' components in a film. However, building a game formalism on this concept becomes problematic because it would presume games to have an artistic purpose and would narrow down the analysis on the more 'artful' components in a game. While such a focus may be interesting for

an approach to games as artworks, it is not conducive to a more inclusive approach to videogames in general. Furthermore, neoformalism's assumptions about the viewing experience need to be adapted and expanded to account for the motor actions of a player and the strategic planning that accompanies those actions. Finally, also the idea of functions and motivations need to reflect the different actions that players can perform compared to the actions of film viewers.

In this chapter I will thus explore the advantages and limitations of neoformalism for constructing an approach to games by setting its main assumptions off against ideas about games and players prevalent in proceduralism and ludology. I focus on ludology and proceduralism in particular because I consider these to be the two main formalisms in game studies with a specific focus on the medium specific characteristics of games as systems. In this sense, proceduralism and ludology hold the potential to critique and supplement neoformalism's existing assumptions with ideas about the workings of rules and the importance of play as a configurative practice. But although this chapter provides a brief introduction into proceduralism and ludology, it does so mainly to situate and refine a neoformalist game approach. This means that in this chapter proceduralism and ludology help to highlight where the neoformalist film approach leaves gaps and how a neoformalist approach to videogames could provide a more inclusive consideration of a game's formal components. Through this exploration, a neoformalist approach to videogames is presented that shows both significant overlap with ludology and proceduralism in its focus on the system, as well as some essential differences in for instance its considerations of the various different functions a game device can have.

Following the structure of the previous chapter, also this chapter will be divided into three main subsections. The first subsection (3.2) deals with the game as a system of interrelating components all of which deserve equal scholarly attention, despite the internal hierarchical organization of these components. But because

games are interactive systems,¹⁹ in which the player is able to change the combinations of devices through motor actions, our considerations of that system and its functions also need to account for this configurative play behaviour. For that reason, the already broad and useful conceptualization of function that neoformalist film theorists use, should be expanded to include affordances for configurative behaviour. This broader conceptualization of function also leads to a suggestion for a new ludic motivation in addition to the different motivation categories used by neoformalist film theorists. Finally, this subsection ends with a discussion of the dominant and the ways in which this concept helps to focus our analysis on more important game moments for the overall functioning of the game, and on certain devices and motivations per game moment which allow us to consider the different responses that different game events can invite.

In the second part of this chapter (section 3.3), I will elaborate on the active roles of the player and the methodological challenges that this brings if we aim to focus on the game's formal components. Because games are interactive systems, the player is required to respond to the game's audiovisual feedback through motor actions and change the perceived events on screen. However, this does not mean that games are wholly constructed by players and that we can only approach games as individual play performances. Instead, I argue that games still shape their own use by enforcing and encouraging more appropriate play responses which leaves us with a limited set of appropriate play instances that allow access to the game's formal devices. The play responses should not just be considered as the

¹⁹ I am aware of the fact that the term interactivity has received criticism for being too broadly used which would supposedly make it unsuitable for describing how a game affords player input (see Aarseth, 1997). However, I would argue that interactivity can be a useful term as long as it is clearly defined. Although I will further explore the issue of interactivity in this and the next chapter, I will, for now, describe a work as interactive when its standard use consists of performing physical activity to change the arrangement of formal components of the work and the work itself actively modifies this arrangement in response to the physical actions of its user.

configurative play behaviour but also as the construction of a narrative, the experience of realism, transtextual references or the game's overall artistic shape. In this sense, the player should be considered as both agent and viewer, whereby different responses are required by different cues in the game.

At the end of this section, I come back to the difficult issue of defamiliarization. Here I argue that similar to neoformalism's ideas around film perception, play is inherently non-practical and different from everyday actions. However, I also argue that this should not lead to an analytical focus on defamiliarization but simply help to consider how game events are inherently different from real world physical events. Instead, I suggest to discard of defamiliarization as a concept for analysing games and replace it by a broad conceptualization of play.

In the third part of this chapter (3.4), I explore how we should consider the game in its historical context, since a player draws upon historically available knowledge of the real world and other artworks for his playing of the game. In this sense, games cannot be considered as self-contained systems. However, in following the neoformalist film approach, we can state that games imply the appropriation of certain background knowledge just as the game implies a certain skill set necessary to play the game appropriately. If we are interested in a game's formal devices, we should thus consider the player similar to how neoformalist film scholars consider the viewer (and how Aarseth's (2007) considers an implied player): as a theoretical construct that exists as the background knowledge, skill set, and configurative responses that a game prescribes to achieve its effects. Then we can still claim intersubjective access to the game's devices even though the functioning of those devices may change over time.

In summary, this chapter further explores the usefulness of the neoformalist approach to films, to come to a neoformalist approach to games. As I will show, many of the basic assumptions of film neoformalism provide a solid base for thinking about games as guiding systems activated through play behaviour. In other cases, however, the neoformalist film approach falls short and requires some essential modifications and supplementations in terms of rules and configurative play behaviour. Eventually, though, this exploration helps me to coin a neoformalist approach to games that takes into account the different system devices and their

functions in triggering our play experience in a broad sense from goal-directed behaviour, to narrative construction, and from realistic or artistic experiences to transtextual references.

3.2 The Game as System

Neoformalism's conception of the film as a 'system' or a 'machine' of interrelating components also provides us with a useful way of thinking about games. In fact, the terminology has already been widely used in game studies. Aarseth conceived a cybertext, and consequently a game, as a 'machine': 'a mechanical device for the production and consumption of verbal signs' (1997, p. 21). And also Bogost (2006, p. 4) talks of games as systems of interrelating unit operational components. In these conceptualizations, however, the terms system or machine are no longer metaphorical in the way they were for neoformalist film scholars. And while neoformalists used the terms to signify the 'machine-like' process by which the different components in a film *interrelate* to cue our responses, Aarseth specifically focuses on the *interaction* between a game's mechanical parts to produce different outputs. This signifies a clear difference between the game system and the film system. Where the film system is considered as a fixed set of interrelating components, the game system is often considered as a set of interacting components that can be combined in different ways to produce new sets.

However, this difference between game systems and film systems is also a matter of analytical perspective. From a player's point-of-view the game system can be seen in line with Bogost as 'complex systems' of interrelating (audiovisual and rule-based) components which comes much closer to the neoformalist concept of film systems (Bogost, 2006, p. 4). However, internally speaking, game systems can indeed be considered more like 'totalizing system' where rules regulate output in the way that Aarseth describes it above. However, as I noted in the introductory chapter, Aarseth's conceptualization of the game system as the underlying engine regulating the production of audiovisual signs, leads to an overemphasis on the game's rules in detriment of its audiovisual output. For the neoformalist film scholar on the other hand, the system is considered for the way its different components work in cuing viewing responses, not for how those components work internally. Here, I would argue that play responses (in its broadest sense) are also

cued by rules and audiovisual cues concurrently, not by rules first and audiovisual cues later. In this sense, also rules are just part of the game's devices that cue and limit responses during a particular moment of play rather than an underlying algorithm that is ever present throughout the experience. Following Tavinor we could say that rules should then be understood as the affordances for actions (Tavinor, 2009a, pp. 95–96), but, I would add, also as the encouragements and enforcements of actions in the form of rewards and punishments. So, during an instance of play, the internal hierarchical or temporal organization of rules, narrative and stylistic devices makes way for the interrelation of these components as they manifest themselves to the player. I would therefore argue that from a neoformalist game perspective, it is the interrelation of system components that should be studied regardless of the internal mechanical interaction that underlies it.

Considering the interrelating components of a game system from a player's perspective has consequences for the way we study games. According to this view, a specific moment during gameplay should not be considered as regulated by an underlying rule system but structured by the interrelation of rules, narrative and stylistic components. Or, to focus back on the question of this thesis, we cannot understand how violence works by focussing on the rules alone. While those rules may facilitate or force certain motor actions, stylistic and narrative devices will cue certain perceptions of those actions, which in turn help to further determine our motor actions. In this sense, narrative and stylistic devices can also nudge us towards the execution of certain motor actions, as long as the rules afford it. All in all, considering a game as interrelating components requires a balanced consideration of all the different components and the way they enhance or contradict one another.

This brief discussion does of course lay bare another clear difference between game systems and film systems. Other than in films where viewers only play a role in *the perception of the work* by bringing the appropriate background knowledge to the viewing, game players also play a part in *the structure of the work* because the game requires a human operator to activate various sets of game components through

motor actions.²⁰ In this sense, games are interactive phenomena because the game actively changes its arrangement of formal components in response to the player's physical mediated actions.²¹ This obviously goes for the game's representational properties such as when we fire an in-game weapon at an enemy and the game shows, and produces the sound of a bullet being fired and a character being hit. However, this also goes for the game's rules as I consider them here. Although the underlying algorithm does not change, the affordances that these algorithms create differ according to the player's actions. As Linderoth argues, 'many of the actions a player engages in during game-play have a transformative aspect, in that they can create new opportunities for other actions' (2013, p. 7). Although I would use the term 'activate' over 'create' since the affordances were always available within the confines of the system, Linderoth is right in the sense that a different position in one of the *Hitman* games provides us with very different opportunities to execute the target. Similarly, choosing to pick up a rocket launcher in *Quake* allows for very different actions than choosing to pick up an axe.

With this in mind it could be argued that the player's ability to change the arrangement of formal game components undermines any system-oriented approach since we can no longer speak of just one work but only of many different performances of that work. By drawing from philosophical aesthetics, Tavinor

²⁰ Here the term 'activation' is chosen carefully over alternatives like 'creation' or 'bringing into being'. As I will argue in section 3.3, terms like the latter two deny a material existence of the game outside of the play experience. The term 'activation' on the other hand, acknowledges the existence of the game prior to and after play, and emphasizes the important role that the game has in encouraging certain play performances.

²¹ This consideration of interactivity largely aligns with Lopes' (2001) argument that interactivity is about changing the structure of the work (if that structure can be considered as the arrangement of formal components) rather than the way users experience it. Furthermore, I would argue in line with Ryan (2006, n. 5, p. 239) that the active response by the game system is necessary for something to be considered as interactive because it also distinguishes interactive phenomena from the 'ergodic' literature that Aarseth (1997) talks about.

refers to this in terms of multiples and instances. He explains that while some artworks are embodied in a single object, such as Da Vinci's Mona Lisa, other artworks can have multiple instances such as a music album or a movie. According to Tavinor, videogames are indeed multiples in the sense that they admit several instances of itself to be played (2009b, 2011). However, videogames are not multiples in the way that an album is a multiple, because unlike an album the instances of play are not as rigidly determined by the nature of the multiple. Instead, different 'playings' of a videogame can vary greatly. For that reason, Tavinor suggests that games may be more like Jazz performances in the sense that in these works, the shared structure is 'less richly defined' thereby leaving room for different variations among the multiples (2011).²² This however, leaves an important methodological question. How do we study the formal characteristics of games if that game can be instantiated in multiple different ways?

Fortunately, neoformalism can help us find a way out of this dilemma. Although I will outline a fuller argument under section 3.3 (and even more elaborately in chapter 5), boiled down, a neoformalist solution to this dilemma is as follows. Rather than considering the game as a neutral platform for idiosyncratic play performances, we should still see the game as an independently existing object that significantly structures its own use. This is in fact also what Tavinor argues when he states that videogames can still be said to exist in its algorithm and

²² The discussion around multiples and instances has a long history in art ontology and is much more intricate than what this brief exploration here suggests. However, in this case, the multiple/instance conceptualization is only used to highlight the epistemological and methodological difficulties that arise for the study of games as interactive systems, not to make any ontological claims about games or art. For that reason, we do not need to delve into the ontological discussion here but only need the general distinction between multiple and instance and an acknowledgement that the instances of games can vary amongst one another quite significantly. Games can of course also be considered multiples because games exist in a range of instantiated copies (e.g. CD ROMS). However, the multiple/instance conceptualization here refers to the game as the encoded interactive system that can be instantiated by play.

representational aspects all of which still encode the scope of the game variations (2011). In other words, while the game multiple does not determine the instances of play in the way that the album multiple determines the album instances, it still places a more significant constraint on the types of variations that can be played in Jazz music. This is not only the case for our perceptions of game content, which are encouraged by implying certain background applications. It is also the case for our configurative behaviour that is either forced by certain game rules or implied by what Tavinor calls more ‘subtle psychological nudges’ (2009a, p. 98). This means that the instance that we perform as analysts shares much (although inevitably not all) of the characteristics of the multiple it came from as long as we are willing to let ourselves be guided by the game’s cues. In this way, we can still claim intersubjective access to the game’s formal components on the basis of our play instance.

3.2.1 Functions of Game Devices

If we assume that the game cues the player’s configurative behaviour as well as his perceptions, cognitions and emotions, we could say that a game neoformalism’s concept of function is much broader than it is for ludologists. As noted, ludologists like Aarseth (1997) and Eskelinen (2001) focus on the game system as the underlying regulator that structures a player’s configurative behaviour. Consequently, the term ‘function’ is used to signify the way that that rule system regulates the behaviour of the different game components to allow for, and present challenges to certain physical manipulation by the player (see for instance the game typology based on functional categories by Dahlskog et al., 2009). In other words, when ludologists ask how a gun functions, they are interested in the way the rule-based system regulates the gun’s in-game behaviour. Asking how a gun functions is thus asking about how the gun handles: how accurately it fires, how effectively it kills enemies, and how much ammunition fits into its magazine. For ludologists, function does not describe the way the element can contribute to the narrative cause and effect chain of the game or the way it may trigger a certain emotional response.

In a neoformalist approach to games, function does not only refer to the way that something allows for configurative behaviour, but also the way that something contributes to a game’s narrative, the way that something can draw on our

knowledge of the real world or genre conventions, the way that something contributes to a game's artistic shape, or even the way something cues certain emotional responses. This broader understanding of function is directly linked to a broader conceptualization of play. As an approach to films, neoformalism's idea of user response is naturally focussed on perceptual, emotional, and cognitive activity performed by the viewer. When applied to games, this idea should not be replaced by a focus on configurative activity performed by the player, but should instead be supplemented with it. As I will argue more thoroughly in section 3.3, players can then be seen as both agents performing and perceiving for goal-directed progress in the game, as well as as viewers performing and perceiving for narrative construction, experiences of realism, transtextual references, and experiences of the game's overall artistic shape. When the game system is seen as structuring all the activities we engage in as both spectator and agent, function can refer to the role that a system's device can play in any of these activities.

With this conception of function in mind, an in-game gun may not only function to perform violence but may also have the player anticipate upcoming enemies. The gun may also play a role in the narrative of the game because it can help to establish the main character as a confident action hero who does not shy away from a gunfight (or perhaps rather a cowardly villain who would choose to shoot someone in the back instead of facing his problems head on). The gun may also draw on our notions of real guns, such as the fact that guns can jam in *America's Army 3* (United States Army, 2009). The gun may make references to other famous videogame guns such as when the gun in *Portal* (Valve Corporation, 2007) seems to borrow characteristics from the gravity gun in *Half Life 2* (Valve Corporation, 2004). The gun may be appreciated for its own artistic shape such as the golden gun in *GoldenEye 007* (Rare, 1997) which is not the easiest to use (it can only carry one bullet) but can be appreciated for its beauty. In fact, the gun may even just function to cue a sense of empowerment, excitement or perhaps even disturbance in the player.

This broader conceptualization of function also encompasses meaning. Here, I understand 'meaning' in line with Thompson (1988, p. 12) as 'the system of cues for denotation and connotation'. Denotation involves both *referential meaning*,

where we recognize things (objects, characters, events, ideas etc.) in the game as aspects of the real world, and *explicit meaning*, where the game directly expresses more abstract ideas like socio-political attitudes through the dialogue and actions of characters. Connotation, on the other hand, can involve *implicit meanings* where the player needs to interpret the game to come to a non-straight forward (but implied) understanding such as the meanings we find in the circles and blue and pink square in *The Marriage* (Humble, 2007), and *symptomatic meanings* where we understand a game to be a reflection of a certain socio-cultural tendency of a large group of people such as when many current games reflect an America-centric perspective making them symptomatic of xenophobia and patriotism.

Neoformalists see meanings as building blocks that an artist can use to build a work rather than something that is ascribed to a work by a user. By seeing meaning as one of the formal constituents of the system that can have a certain function in the work, a neoformalist approach to games also moves away from proceduralism. As briefly argued in the introduction, proceduralism does not see meaning as one of the game's devices which can function in a variety of ways but sees the expression of meaning as the primary purpose of the system. This means that proceduralists like Treanor, Schweizer, Bogost and Mateas (2011) see 'reading' or 'interpreting' the game as their main critical activity. This does not only suggest that proceduralism comes closer to a *hermeneutic* approach that seeks to discover meanings in the game, rather than a *poetic* approach (like neoformalism) that takes meanings and other effects as departure points and tries to discover how these are achieved (see Culler, 1997, pp. 61–62). It also suggests that proceduralists focus on more 'indirect' (implicit and symptomatic) meanings, since, according to Bordwell (1989c, pp. 1–13), those are the meanings that require interpretation, while more 'direct' (referential and explicit) meanings are grasped through comprehension.²³

²³ Although I am unsure whether proceduralists would wholeheartedly admit to a concentration on indirect meanings since 'meaning' or 'interpretation' are not explored in much detail in their works,

According to a neoformalist approach to games, proceduralism's focus on interpreting meanings is problematic for two reasons. First of all, as also Thompson (1988, pp. 14–15) argues, a focus on interpretation means that even when a work has clear referential or explicit meanings, the analyst has to deal with them as if they were implicit. This problem shines through in Murray's analysis of *Tetris*. Although the game's audiovisual cues show clear similarities with block sets, she seeks for a symptomatic meaning and describes the game as 'a perfect enactment of the overtasked lives of Americans in the 1990s – of the constant bombardment of tasks that demand our attention and that we must somehow fit into our overcrowded schedules and clear off our desks in order to make room for the next onslaught' (1997, p. 144). Such a symptomatic meaning could in principle be 'read' from *Tetris*, as long as we acknowledge that it is based on Murray's background knowledge from the time of her playing rather than the historical background during the time of its creation (which consisted of an economically stagnating Soviet Union rather than a demanding capitalist USA). However, such a reading ignores the more obvious referential similarities between *Tetris* and construction sets such as the *Lego bricks*, or similarities with assembly puzzles such as various *pentomino puzzles*. In other words, if one is keen to find the meaning in *Tetris* it is unclear why one would want to discard of these referential meanings in favour of more connotative symptomatic meanings.

However, an even bigger problem with focussing on meaning like this, is that it ignores essential other functions that contribute to the overall experience of the game. This is exactly what Eskelinen gets at when he criticizes Murray's reading of *Tetris* and states it does not tell us much about 'the features that make *Tetris* a

their use of terminology and some of their 'readings' do suggest that this is the case (See for instance Treanor & Mateas, 2011; Treanor, Schweizer, Bogost, & Mateas, 2011). I should again add that this concentration makes sense for serious or persuasive games that are often build out of relatively abstract mechanisms that express more symbolic meanings. See for instance many of Bogost's interpretations of persuasive games in (Bogost, 2007).

game' (2001). While I wouldn't phrase it in these ontological terms, Eskelinen is right if he means to say that it does not tell us much about the ludic functions of *Tetris*. In this case, the meanings of the tetrominoes (whether referential or symptomatic) only play a minor role in why they are there. A more important reason for why they are there is that they facilitate and structure our configurative actions by setting goals and providing challenges. Here also the referential meanings of the tetrominoes as puzzle blocks supports this ludic function.

In this case, I would say that the ludologists are right. The formal devices in abstract games like *Tetris*, are often there for ludic reasons, and not to communicate meanings (*The Marriage* being an interesting exception to this rule). However, this does not mean that we should therefore assume that ludic functions are always the more dominant ones. While Aarseth (2004a, p. 49) has claimed that also the representational characteristics of Lara Croft's body are irrelevant because they do not tell us much about the gameplay of *Tomb Raider* (Core Design, 1996), I would argue that her physique also functions to denote Lara as an athletic adventurer and her skimpy clothing helps to establish her somewhat rebellious nature which has led her to break bonds with her upper-class British family. In extension of these narrative functions, Lara's body also functions in terms of erotic appeal. In this sense, Lara is simply a set of characteristics with some of these characteristics having specific ludic functions, others having certain narrative functions, and others again having a function to appeal to certain erotic desires.

Neoformalism thus helps us situate an approach to games somewhere in between ludology and proceduralism. In line with ludology, this new game formalism concentrates on function over meaning, but closer to proceduralism, this approach still incorporates meaning as one of a game's formal constituents that function to cue play responses. With this framework in mind, moments of game violence can be considered for the meanings expressed, the function that those meanings have in cueing our play responses, and the many other functions that a moment of violence can have. As I will argue below, certain functions may be more important during a particular moment of violence, and certain moments of violence may be more important for the overall functions of the game. However, the importance should not be determined by the approach but by the game and game moments under

investigation. So, for now, a broad conceptualization of function makes the neoformalist approach to games a more inclusive approach than ludology and proceduralism.

3.2.2 *Motivations of Game Devices*

As outlined in the previous chapter, neoformalism provides useful categories of motivations to help see how a device functions. By asking ourselves what the reason is for the presence of a certain device, these categories help us tease out *compositional*, *realistic*, *transtextual* and *artistic* motivations. As noted, these reasons are not the reasons given by a maker, but by the user on the basis of the work's functioning. It seems that all of these motivations can be mapped neatly onto games. The opening cutscenes of *Grand Theft Auto IV* (Rockstar North, 2008) for instance, can be considered for their compositional motivation since they get us acquainted with the protagonist Niko and help us construct a narrative of an immigrant chasing the American dream through his violent ways.

At the same time, these cutscenes can also be considered for their realistic motivation. The references to a war scarred Eastern Europe resonate with our knowledge of the war in former Yugoslavia, and Niko's quest for the American dream makes sense because we know from the real world that this is one of the guiding beliefs of the current day American society. In these cases realistic motivation is more of an unobtrusive backdrop, a secondary motivating force to the unfolding of the narrative. To establish Niko Bellic compositionally as an eastern European character that has come to America for a better life, it makes sense realistically to give him an eastern European accent and to model the American city of his arrival on a real big city in the USA like New York. In other words, realism adds to the believability of the narrative and thereby keeps the player invested in its unfolding.

I should reiterate that I understand something to be realistic in terms of certain aesthetic conventions of realism and in terms of its relationship with the real world. In conventional terms, the realism of Liberty City becomes salient because its graphics and physics show yet another leap in technological advancement compared to the game's predecessor and because it is the first time that a game

environment was so closely modelled on an actual real world city. As Jenkins puts it in one of his blog posts with regards to *Half Life* (Valve Corporation, 1998):

Because we read realism against existing artistic conventions, breakthroughs in realism call attention to themselves — they are spectacular accomplishments. When the marines behaved “realistically” in *Half Life*, it was so compelling precisely because we read them against how npcs had functioned in previous games (2007).

Because our norms change over time, realism is also historically defined. Certain characteristics initially perceived as highly realistic may become automatized after a while which may then cause makers to employ other characteristics that cue a new kind of realism (e.g. *Mortal Kombat*).

However, the realism of Liberty City cannot be cued without a reference point in the real world. Liberty City does not just look more realistic because it differs from other cities in videogames, but because it differs from other cities in videogames in its resemblance to real world cities. As Grodal puts it: ‘realism could (...) be considered a balancing act between the unique which provides the ‘salience of the real’ and the typical which provides the cognitive credibility and familiarity of the real’ (2002, p. 73). With this I am not claiming that our knowledge of the real world is in any way objective and unmediated by a specific cultural and historical perspective. The only thing I argue by installing a mimetic concept of realism into the neoformalism that I am arguing for here, is that our comprehension of the representation requires us to also draw on knowledge that we have adopted from our experience of the real world, however culturally or historically defined you think this is.

In videogames, transtextual motivation is often centred on rule-based mechanisms such as the possibility to respawn, have a certain number of lives, or gain extra lives. These kinds of mechanisms are familiar to us because they exist across a range of different games and can therefore be considered for their transtextual motivation. However, we should keep in mind that these mechanisms will often have a more important ludic motivation, (as I will argue below). In other cases, transtextual motivation may be more dominant because the device is mostly there

to give an homage to other games or plays around with our knowledge of other cultural artefacts or game conventions. In this case, the physical appearance of Donkey Kong is a clear reference to King Kong, and the graphical style and three lives limit in the different warp zone levels in *Super Meat Boy* (Team Meat, 2010) are obvious references to *Super Mario Bros.* In another interesting example, *Braid* (Number None, Inc., 2009) ends each level with a clear reference to the *Super Mario* games by having a character tell you that ‘your princess is in another castle’. However, by using this reference in such a different context, the message takes on a different function. Where these messages in the *Super Mario* games simply functioned to congratulate the player for making it through the level, explain there were more levels to come, and keep the narrative of the kidnapped princess in place, in *Braid* the message becomes more sinister. By casting doubts in the player about the legitimacy of the character’s story and the actual existence of the princess, the message does not function as the congratulations for the achievement of yet another random level, but, in its contrast with the message in the *Super Mario* series, the message frames the player’s actions as a depressing, unrealistic and repetitive search for love.

Artistic motivation is probably the most difficult category to pin down because it will often be overshadowed by more prominent other motivations. In a game like *Fez* (Polytron Corporation, 2013) the 8-bit graphical style of the game can certainly be considered for its artistic motivation although it also serves an important transtextual motivation as homage to the classic videogames of the 1980’s. Similarly, the black and white style of *MadWorld* (PlatinumGames, 2010) is clearly motivated artistically, but it also has a transtextual motivation because it is borrowed from the *Sin City* comic books created by Frank Millar.

Thompson (1988, p. 19) has argued that abstract films or paintings are almost completely organized around artistic motivation. While this in no way goes for abstract games in general, one could argue something similar for an abstract game like *Flow* (Thatgamecompany, 2006) where the serene graphics and music are there only for an artistic purpose. There is no story that these devices can add to. There is no real reference to our notions of the real world. There is not even a clear game

goal that the player can strive for.²⁴ The peaceful ‘swimming’ around in this environment is pleasurable for its own sake, and the devices are there only to contribute to its overall abstract shape. However, other abstract games like *Tetris* or *Bejeweled* (PopCap, 2001) clearly have a more important other motivation.

Here then, the neoformalist categories only take us so far. With games being quite distinct representational media due to their configurative user function, these categories are unable to fathom perhaps the most essential reason for the inclusion of a device in games. After all, games also require motor actions from the player and for that reason a lot of the elements in games are there to structure those motor actions. A game device may be justified because it gives the player a goal to strive for, or an opponent to battle. Similarly, a set of game rules may be motivated because it tells the player what he can or cannot do in his quest for the game’s goal. Since neoformalist film analysis does not consider a category that can encompass these kinds of motivations I will provide one here.

When a device facilitates the player’s rule-bound, goal-directed progress in a game I will refer to its *ludic motivation*. A device that is ludically motivated should facilitate a specific subset of play where the player acknowledges the game’s goals and strives for them actively while voluntarily subordinating himself to a confining set of rules and challenges. A ludically motivated device facilitates play as a competitive process of winning and losing, it allows the player to devise a strategy and execute it. This is not the broader play response we have with games, which may for instance also include the construction of a narrative out of the game’s formal clues. Instead, ludically motivated devices should be seen to facilitate play behaviour in a narrower sense which is often understood as ‘gameplay’ and set off against narrative (see Lindley, 2002). This narrower understanding of gameplay

²⁴ I recently learned that *Flow* does have a victory condition which consists of getting to the absolute bottom layer of the game. However, this victory condition remains hidden from the player during the entire game which leaves the player to enjoy the aimless ‘swimming’ for its own sake.

comes closer to what ludologists refer to as configurative activity, if we assume that that configurative activity is also goal-directed and can be confined as much by rules as well as audiovisual elements.

While ludologists would likely argue that this ludic motivation is always the most important one in games because they assume configurative activity to be a game's dominant user function (Eskelinen, 2001), I am reluctant to make such claims a priori. Ludic functions indeed play an important role because they facilitate our progression towards the game's goal, play is, however, more than that rule-bound, goal driven progress. As I noted briefly in the previous chapter, a neoformalist approach to games should rely on a broader conceptualization of play that also includes narrative construction, experiences of realism, references to other games and other cultural artefacts, and an experience of a game's overall artistic shape. In line with this conceptualization of play, ludic motivations become more important when a device is absolutely necessary for our goal-directed progress. However, once a device is more optional for our goal-directed progress, other motivations can most certainly come to the fore. I will discuss this more thoroughly in the next subsection.

Ludic motivations are of course dominant when a device has no other motivations. In abstract games like *Tetris* or *Bejeweled*, for instance, devices often only have a ludic motivation. But also in more figurative games that do include a narrative, devices can have ludic motivations without having a compositional one. A score counter that indicates the player's success with some abstract units of points is a perfect example of a device that serves ludic purpose but adds nothing to the game's narrative layer. These score counters that existed mostly in older style arcade games presented the player with a goal to strive for (i.e. a high score) but usually added nothing else.

In the 'beat 'm up' game *Double Dragon* (Technos Japan, 1987), for instance, the player controls one of the two main characters in his quest to save his kidnapped girlfriend Marian. While kicking and punching his way through four different areas in the game, every well-aimed kick and punch provides the player with a seemingly random increase in points. In this case the score system provides a secondary goal to strive for aside from the primary goal of finishing the game and saving Marian.

In other games like *MadWorld*, the points are more integrated into the game since they indicate the player's progress in a level and even help to unlock new areas or power-ups. In this case the score system is directly linked to the primary goal of progressing through the levels. And because these scores make no sense whatsoever in the narrative of the game, the device clearly has no compositional motivation for being there.

In many modern day videogames however, ludic motivations will often overlap with other motivations. In the first two *Bioshock* games for instance, the money is both ludically and compositionally motivated because it not only allows us to buy ammunition or healthpacks necessary to progress through the game, it also helps our understanding of the space and time of the fictional city of Rapture. The currency helps to tell the story of a once vibrant utopia founded by Andrew Ryan (depicted on the money) that has since fallen into chaos which left its currency invaluable to the city's genetically modified former citizens. The player can therefore find money just about anywhere; thrown away in trashcans, left behind in cash registers or purses, or just scattered around the environment.

In *Grand Theft Auto* (DMA Design, 1997), and *Grand Theft Auto II* (DMA Design, 1999), score is counted in money and is a necessary device to unlock new areas. In these cases, the score system not only has a ludic motivation but also has a realistic motivation because it makes sense in reference to our real world that someone would get paid large sums of money for performing tasks for the city's crime syndicate.

One could argue that these score or money mechanisms also have a transtextual motivation since they are manifestations of game conventions existent across a large variety of different games. We may recognize the arbitrary score system of *Double Dragon* as a remnant of older arcade games like *Pac-Man* (Namco, 1980) where it provided the only victory condition. And we have of course gotten quite used to money systems allowing us to attain better weapons or XP-systems allowing us to level up our character.

Finally, a ludically motivated device may also overlap with an artistic motivation. In the *Max Payne* games for instance, the bullet-time mechanism has a ludic

motivation because it helps the player aim more accurately thereby assisting him in his quest for the game's goal. However, the bullet-time mechanism also has an artistic motivation because the slowing down of time presents the world in a highly stylized and original way that can be considered as aesthetically pleasing. Similarly, the unique use of almost only white, orange and red colours in the free running game *Mirror's Edge* (EA DICE, 2008) can be considered for its artistic motivation but it also serves an important ludic purpose since it shows the player what the route is he can take.

These categories of motivations help us see the many different roles that devices play in videogames. By considering the different devices at play during a violent sequence we come to see how certain devices are there for the establishment of a narrative, how certain devices are there for ludic reasons, how certain devices are there to refer to our knowledge of the real world or our knowledge of other cultural artefacts, and even how certain devices are there mostly to engage us in an appreciation for their own artistic shape. A particular device may have a range of (sometimes even contradicting) motivations, and a particular moment of violence will often consist of several of these devices. This means that a violent sequence often serves a range of different purposes, all of which contribute to our perceptions and performances of that violence.

3.2.3 *The 'Dominant' in Games*

According to the discussions above, a game or even a single game moment can have a range of different, narrative, stylistic and rule-based devices all of which can have a plethora of different motivations for being there. By considering games this way, we escape an overemphasis on rules, and can consider devices for more than how they structure our configurative behaviour or how they express meaning. Thereby, this consideration also broadens our ideas of what rules can do in games. Rules, as they are manifested in affordances, can indeed be ludically motivated. However, those rules can also have important compositional motivations, such as when the tape recorders in *Bioshock* (2K Games, 2007) afford listening to, thereby having the purpose to cue the construction of the game's narrative. Rules can also be transtextually motivated such as the earlier mentioned example of the three lives limit in *Super Meat Boy*. Rules can have important realistic motivations, such as the

driving physics in a game like *BeamNG.drive* (BeamNG, 2013), which seem to be mostly there to experience the realism of driving and crashing cars. In fact, rules can even be artistically motivated, such as the control of flower petals in a game like *Flower* (Thatgamecompany, 2009).

A neoformalist approach to games thus broadens the scope of our analysis. However, if we start from the basic premise that all devices are equally important in cueing out play responses through a variety of different motivations, how do we determine which devices and motivations to focus on?

Here, the neoformalist idea of the dominant comes in handy, but before the concept can become useful for a study of games, some significant changes must be made to its conceptualization in film studies. As noted, neoformalist film scholars base their idea of the dominant on defamiliarization, which means that a device and motivation become foregrounded when they are more effective at making the representation more unfamiliar. However, transposing this idea to games, would again limit the scope of the analysis to study only the more unfamiliar components, which is what we were trying to avoid by exploring a more inclusive new formalism in the first place.

As briefly pointed out in the previous chapter, I therefore suggest that we base the idea of the dominant on a broad conceptualization of play. To explain this, I first draw from Leino's gameplay condition (2010). According to Leino, the gameplay condition is what the player *needs* to do in order to keep playing the game, with the added note that *playing the game* is significantly different from *playing with the game* in which the game sets no clear requirements for play and the player could in principle keep playing for as long as he wants. Leino then continues to argue that the player experiences content as more or less significant in relation to this gameplay condition. Put differently, certain game elements become foregrounded because they are essential for us to take note of to keep playing the game. This conceptualization of a gameplay condition is useful because it helps to see how a certain analytical playing strategy – in this case, the desire to keep playing the game – can foreground certain devices that become the focus points of our analysis.

However, as I will show more elaborately in chapter 5, Leino's playing strategy is still somewhat limited in the devices it can foreground. Because Leino does not talk about goals but rather about the general imperative to keep playing,²⁵ his gameplay condition only allows for a distinction between devices that are absolutely essential for ludic progress (the undeniable), and devices that are not (the deniable). However, a device can also have a ludic benefit while not being essential for us to keep playing, for instance when the game presents us with optional secondary goals. In order to highlight what is ludically important, we are therefore better off trying to optimize our chances of achieving the game's goals (as I will show in chapter 5, this is what Smith (2006) calls a rational playing strategy).

Furthermore, Leino's playing strategy does not tell us anything about what devices are significant for the narrative of the game to unfold, or what devices are significant for the overall artistic shape of a game moment. In this respect, Leino's gameplay condition is very much a ludological concept that focuses on play as a configurative practice: the ability of the player to keep manipulating the game. However, if we want to consider a broader range of motivations that a game device can have, we need a different playing strategy. We should not just focus our analyses on those elements that are essential for our goal-directed progress; we should also have the basic predisposition to construct a narrative from the game's cues; we should be open to draw on our knowledge of the real world and certain realism conventions to experience a device's realism; we should be willing to make transtextual references; and finally, we should be open to experiencing certain devices for their own artistic shape. This is a playing strategy that I will term the

²⁵ Leino talks of a desire to keep playing rather than a desire to achieve the game's goals because he aims to include those games that have no clear (end) goals like *The Sims* series or *Tetris*. While Leino explains that this formulation is simply a more analytic understanding of goals as the imperative to play (2010, pp. 141–142), it is still problematic if we aim to highlight important ludic elements in games that have a variety of different secondary goals, or games that allow for both free form play and goal-directed play such as the *GTA* series.

cooperative playing strategy in chapter 5. It is only when we fulfil all these predispositions, that certain game devices become more significant in relation to one or more of these predispositions.

This is how we should consider the dominant in a neoformalist study of games. Instead of relying on defamiliarization, the dominant simply relies on a broad conceptualization of play in all its different registers. This allows us to focus the analysis on two levels. On a more holistic level, the dominant helps us see which of the various moments in an instance of the game should be considered as the more important ones to analyse. A moment can be considered more or less crucial to the development of the main plotline (what neoformalists film scholars refer to as bound and free motifs); it can be more or less crucial for the overall realistic quality of the game; it can be more or less crucial for the overall transtextual references that the game makes; it can be more or less crucial for the game's overall artistic shape; and of course a game moment can be more or less crucial for the overall progression of the player towards the game's goal. In general we could for instance say that main quests are often ludically and compositionally more dominant than side quests. Similarly, 'easter eggs' will be less ludically dominant than 'bossfights.' However, what is perhaps more interesting here, is that, once the ludic function of a device is more optional or non-existent, certain moments can also become dominant moments of realism or artistic quality. For example, there is a specific moment in *Bioshock 2* (2K Marin, 2010) where we are traversing the ocean floor when the music swells and we come to the edge of a cliff with a view of the underwater city of Rapture. While the city itself also serves compositional purposes, that particular moment cues us to appreciate the game as a crafted artefact. It is like the game is telling us, 'look here, is this not something artistically spectacular?!'

Secondly, on a moment-specific level, the dominant helps determine which game devices play an important role during a specific game moment because those devices will be the ones to function more significantly in one or more of the motivational categories. In extension, the dominant motivations during a specific game moment will cue certain perceptual, cognitive and emotional responses to that game moment.

Let's take an example. During a quick-time-event (QTE) (also known as an interactive animation) in *Max Payne 3*, we get Max to fight a villain with a machete by pressing a specific number of keys within a set timeframe for the animation to reach its desired ending. During this QTE a wide range of devices are at work with a range of dominant motivations. First of all, the key sequence that is explicitly displayed on screen has a very dominant ludic motivation since the player is forced to take note of it and press it in order to progress in the game. While one could argue that the displayed keys also play a transtextual role since the combination of text and imagery refers to a graphic novel style that the *Max Payne* games are indeed known for, those motivations take a back seat to more dominant ludic motivations in this sequence. The reason for this is simple. During this QTE, the displayed number of keys are ludically enforced, not optional. In fact, the displayed key sequence follows an intentionally counterintuitive pattern which presents additional challenges to the player and forces the player to pay even more attention to these ludically motivated devices.

However, there are also other devices at work in this sequence with more important other motivations. For example, the game's virtual camera that pans around Max and the enemy to fully frame every moment of impact during the fight is predominantly compositionally motivated. The camera movement and framing help to emphasize the intensity and emotional significance of the actions in the narrative and do not add anything ludically. Furthermore, the screen often blurs and flashes during the QTE. These optical effects could potentially have three motivations. First of all, the blurring and flashing could have a compositional motivation since those seem to represent the effects of Max's addiction to alcohol and painkillers. However, in this case, Max has just given up drinking a few missions before. This leaves two other dominant motivations. First, the optical effects have a clear artistic motivation, since they add an interesting visual element to the game. And secondly, these optical effects have a transtextual motivation because they make a clear reference to Tony Scott's *Man on Fire* (Foster, et al. & Scott, 2004), which uses the exact same effects and tells a similar story as *Max Payne 3* (a story of a kidnapping in a big Latin American city).

While there are more devices at work during this particular sequence, I would argue that the dominant guides us to these devices and motivations in particular. By having all the predispositions of play, we come to see how the sequence is built up out of a range of different devices that alternate between dominant ludic, compositional and finally artistic and transtextual motivations. Here I should add that the different motivations and different devices do not necessarily work to encourage one unambiguous response. In fact, different devices and different motivations can work independently of one another and therefore have the potential to contradict each other in the type of cues given to the player. This is in line with what different authors like Juul (2005), Sicart (2009), and Jørgensen (2012) have argued about the relationship between fictional world elements and rule-based elements. However, rather than framing it as a kind of ludonarrative dissonance (Hocking, 2007), I would say that game devices will often have a plethora of different motivations, some of which cue contradicting responses. When we consider the dominant motivations of a device or of a range of different devices during a particular game moment (e.g. violence), such contradictions should not be ignored in an attempt to come to one dominant consensus. Instead, such contradictions should be acknowledged to explain the various and sometimes paradoxical ways in which game devices cue our responses.

3.3 The Role of the Player

Videogame scholars generally ascribe a very important role to the player in their account of games. This is no surprise since, as I argued above, play is not only the perceptual and cognitive process of hypotheses testing against a given set of cues, it is also the physical process of activating and configuring material to form different cues. This makes the player also a physical necessity to the game, not just a cognitive-perceptual one. We need a player so we can study the game, which leads to different epistemological and methodological issues. However, in much of the game studies literature the importance of the player has also permeated ontological queries into games. In their paper questioning the importance of players in games, Björk and Juul (2012) bring together an interesting selection of quotes from around the game studies community, many of which argue that there needs to be a player for there to be a game. Ermi and Mäyrä (2005, p. 15) for instance state that ‘there

is no game without a player'. Calleja (2011, p. 8) argues that 'a game becomes a game when it is played'. And Consalvo (2009, p. 415) states that 'games are created through the act of gameplay, which is contingent on acts by players'.

Statements like these are common in game studies. They show us how games and players are indeed intrinsically connected. However, the rhetoric of these statements makes an epistemological and methodological issue into an ontological one. Not only do we need a player to know or study the game, we even need a player for there to be a game. Consalvo's (2009) statement that 'games are created through the act of gameplay' therefore creates unnecessary complications in an argument about how our play responses are partly dependent on what background knowledge, skills set and intentions we bring to the game. That initial statement does not logically follow from the rest of the argument, nor does the rest of the argument require that first statement to be true. This statement only adds a highly relativistic element to her argument by denying the existence of a material system prior to the experience of gameplay. As Myers (2007) rightfully asks: 'Are games such as *Monopoly* not to be considered games at all unless they are (...) played with proper effort?' (2009, p. 3). I would argue that games do exist prior to play, and they are not created by players but by teams of programmers and designers who have certain intentions with their creations (even if the neoformalist approach is not interested in these intentions and only need the assumption of agency to consider the motivations for the presence of a device). In line with Tavinor (2011), I would thus argue that digital games do exist in the form of algorithms and representational aspects (see chapter 5), or to put it in neoformalist terms, its rule-based, narrative, and stylistic devices.

Of course, Consalvo's (2009) paper does raise an important epistemological question about how we can get to know the game system without our knowledge being tainted by our personal play performance. After all, even if the game system is not being created by the player, it still needs to be activated by his physical actions which risk clouding our understanding of the system with personal choice. The question thus becomes: how do we gain intersubjective access to the game multiple through our instance of play? Or more accurately, how do we make sure that our instance of play is appropriate with regards to the functioning of the game multiple?

While I will elaborate on this issue of appropriate play in chapter 5, I will briefly outline the argument here. To start us off, Aarseth provides an insightful quote. When discussing the broader category of ergodic works²⁶ he states:

The ergodic work of art is one that in a material sense includes the rules for its own use, a work that has certain requirements built in that automatically distinguishes between successful and unsuccessful users (1997, p. 179).

This quote links to Leino's gameplay condition discussed above. In fact, Leino follows this quote from Aarseth and argues that games can indeed enforce a certain play response by punishing certain responses with consequences that decrease the long-term chances of 'the player remaining a player of the game' (Leino, 2010, pp. 150–151). Ludologists like Aarseth and Leino thus help to see how a game system can encourage or even enforce a certain limited set of play responses. Or to put it differently, the game multiple encourages a limited set of instances and does not function as a neutral facilitator of an endless array of different play performances.

However, as I also noted in the previous section, ludologists like Leino and Aarseth focus only on how the game can encourage configurative behaviour. Aarseth even specifically argues that the difference between ergodic works like games and non-ergodic works like films is that the first category shapes its own use, while the latter category does not because it does not allow for the physical manipulation of its material (1997, p. 179). This focus is problematic because it implies that games have no say in the narrative we construct, the realism we experience, the transtextual references we make, or the artistic shape we experience for the game's overall shape. To be charitable to Aarseth and Leino here, it could be that they

²⁶ Ergodic is the term Aarseth proposes to substitute interactive. Ergodic works are works that require 'non-trivial' 'extranoematic' effort to be traversed, while nonergodic are traversed with trivial effort and no extranoematic responsibilities. Games are therefore considered ergodic while films are nonergodic (Aarseth, 1997, pp. 1–2).

simply mean that games can *enforce* a certain physical play response through rules while non-ergodic works like films can only *encourage* certain perceptual, cognitive and emotional responses. However, even if this is the case, they remain silent about how games may or may not encourage other types of responses since their interest remains fixed on the player's configurative behaviour. Here then, I argue that neoformalism can contribute significantly. As I explained elaborately in the previous chapter, neoformalist film scholars assume that a film can most certainly shape our perceptual, cognitive and emotional responses in all its motivational categories. When translated to games, such an approach would thus argue that games are not just capable of shaping the player's physical behaviour, but are capable of shaping our play responses more broadly from narrative construction to the experience of the game's overall artistic shape. In fact, I would argue that all those responses are inherently tied up with the configurative decisions we make in instantiating a particular set of game devices. This means that games do not just enforce or encourage behaviour through rules, but also encourage behaviour by providing narrative context, referring to our notions of the real world or other artefacts, or even emphasizing artistic shape. At those moments, the game may give us what Tavinor (2009a) calls 'psychological nudges' to stop and appreciate the craftsmanship of a beautifully drawn background (see for instance Schott & Burn, 2004), or perform the morally dubious or instead morally right behaviour by providing narrative context. In other words, the game multiple encourages an even more limited set of play instances as long as we are willing to take into account the broader collection of devices and motivations that the game provides. I should note again, that certain devices and motivations may encourage contradictory behaviour, such as when compositionally motivated devices tell us we are a ruthless killer but certain ludically motivated devices punish us with a score deduction when we kill innocent bystanders. In such cases, I would argue that the game multiple encourages various appropriate contradictory instances of play. I will delve into this issue more in chapter 5.

The neoformalist approach to games can thus be seen to overlap and expand on ludology's idea of a 'self-shaping system'. Because games are considered to enforce, encourage or discourage certain play responses, we can perform an instance of play that is more or less appropriate according to the functioning of the

game system as long as we are willing to let ourselves be guided by the devices and motivations of that game system. This means that a neoformalist would need to adopt an analytical playing strategy that follows the game's cues in all the play responses from his goal-directed actions to the construction of a narrative, and from the experience of realism to the references to other cultural artefacts or the experience of the game's artistic shape. In chapter 5 I refer to this playing strategy as 'cooperative play'.²⁷ It is finally through this cooperative playing strategy that we are left with a more limited set of appropriate play instances that are highly encouraged by the game's formal devices and thereby also allow for intersubjective access to those devices.

3.3.1 The Player as Agent and Spectator

For a non-player the difference in motor action will likely be the most identifiable difference between game play and film viewing. Where the viewer remains relatively passive, only scanning the screen with perhaps an occasional bodily twitch, the player is engaged in continuous physical effort, pressing buttons and moving analog sticks. However, these lower level motor actions are preceded by certain planning, understandings and intentions, none of which can be grasped through observation alone. To quote Consalvo: 'we cannot understand gameplay by limiting ourselves to only seeing actions and not investigating reasons, contexts, justifications, limitations, and the like' (2009, p. 415). To fully understand the difference between playing games and watching films, you need to play yourself.

Aarseth (2001, 2003, 2007) has emphasized this need to play on several occasions and argues that while other approaches like observation and player interviews can provide additional insights, only playing ourselves can give us a solid grasp on what

²⁷ Cooperative play as I refer to it here in single-player games should not be confused with cooperative play in multiplayer games. In this case, the cooperation occurs between the player and the game, while in multiplayer games, the cooperation occurs between different players.

playing a game is like. For Aarseth and other ludologists like Eskelinen (2001) playing is essential because it helps us understand the activity of play as configurative practice different from other more interpretative practices like film viewing. In these cases, configuration is not just seen as the physical practice of changing the structure of the work, but extends to a more general sense of agency that includes the dispositions preceding those actions (see also Gregersen & Grodal, 2009, p. 67). As Aarseth puts it:

When others play, what takes place on the screen is only partly representative of what the player experiences. The other, perhaps more important part is *the mental interpretation and exploration of the rules* [emphasis added], which of course is invisible to the non-informed non-player (2003, p. 3).

Here ludologists make a strong point. They focus on the player as active agent and show us how observing screen action cannot put us in the role of the user the way observing a film's screen action can. A first-hand experience of that action would not only make us aware of the intensified physical involvement one has during play, but also of the mental processes that come with an increased sense of agency. These mental configurative processes consist of constructing the general intentions behind our actions in the form of strategies or tactics. This means that a player's perception of screen output can be very different from a viewer's perception of a film, since a player anticipates actual motor control over the situation.

To understand this better I refer back to Thompson's (1988, p. 8) distinction between film perception and perception in everyday life quoted earlier in section 2.3.2. According to her, our perception in everyday life is focused down on those elements that are relevant for our immediate actions and we filter out those elements that are not. Here Thompson's explanation of everyday perception seems to fit the perceptual processes of the *player as agent*. As an agent in games, our perceptions are indeed closely related to our actions. We perceive the game environment so we know what to *do* or where to *go*. In line with ludology, our perceptual and cognitive resources are not employed for narrative comprehension but rather in preparation for the appropriate action executions. Here, perceptual processes are put in service

of action and not engaged in for the reception of narrative, transtextual references, realistic or artistic qualities.

Neoformalism cannot adequately account for these processes since the whole approach is reliant on the idea that film viewing is a perceptual process that is not employed for action but rather purposeful in itself. However, exactly because neoformalism focuses on film viewing, it also adds an angle into the study of the play activity that is overlooked by scholars such as Eskelinen (2001) or Aarseth (2004b). By focusing on play as configurative activity (in physical and mental form), these scholars pass by the fact that playing games is not only configurative action but also our viewing of that action on screen for the construction of a narrative, experience of realism and artistic quality, or to find transtextual references.

Here, I link up with other scholars like Newman (2002) or Ryan (2006) who argue that game play cannot be considered as just one type of engagement but should instead be considered as both a kind of configurative activity and a more film-like viewing activity (or what Newman refers to as online and off-line engagement). However, other than Newman who considers this a difference between active play and a more receptive engagement with cutscenes, films or even box-art, I would argue that a film-like spectatorship also occurs during active play and can even become the more dominant engagement with the game depending on the cues in the system.

While neoformalism cannot adequately account for the configurative processes experienced during play, it does provide an excellent framework to emphasize and analyse the activities of the *player as spectator*. Here Thompson's (1988) categories of perception can be applied quite accurately. On a physiological level we cannot help but recognize shapes and colours from a combination of different pixels on our screens since the game forces the application of certain schemata of these shapes and colours from the bottom-up. On a preconscious level we test certain schemata from the top-down and start to infer certain characters as the same person across different scenes, we come to follow causal relations in events, we see certain objects in the environment, and we understand what certain symbols stand for. As argued in the previous chapter, this does not mean that our schemata come to determine

our inferences, only that they initiate them. Finally, on a conscious level, our schemata are also tested against the game's cues from the top-down but then require conscious revisions. During a game like *Bioshock* for instance, the surprise plot twist means that we have to re-evaluate our assumptions about the game's narrative up until that point and create new hypotheses about what has actually happened and what will happen next. Scholars like Eskelinen (2001) or Linderoth (2013), who emphasize agency over spectatorship, are unable to satisfactorily account for these processes since narrative comprehension or artistic interpretation always takes second place (or even no place at all) to perception for the sake of action execution. While it certainly makes sense to assume that we perceive for action during moments with dominant ludically motivated devices, we should not presume this to be the default engagement during any moment of play.

I therefore suggest that a neoformalist approach to games should account for the player as both agent and spectator, whereby the dominance of either one of these player roles should not be presumed a priori but determined by the game moment under investigation. These activities exist as extremes on a continuum of player engagements and may be triggered to a greater or lesser extent by the existence of different devices and their functions in the game. As I will argue more thoroughly in chapter 5, the devices that have a dominant ludic function cue us to adopt a more preeminent role as agent. At these moments, other functions will move to the background or even work in service of the dominant ludic function (such as when the respawning mechanism also references genre conventions), and cue us to perceive for actions that are relevant for our success in the game. At other moments, the ludic function may be more optional or even non-existent. At these moments, more dominant compositionally, realistically, artistically or transtextually motivated devices may come to the fore and cue an engagement that is more on the spectator-side of the continuum where we engage our perceptual cognitive resources for construction of a narrative, drawing on our notions of the real or other cultural artefacts, or even to experience the overall artistic shape of the game or game moment. During play we then continuously shift between perceiving to execute action and perceiving different characters, objects, and events for narrative comprehension or realistic experience. This also explains why fast-paced, skill-based games encourage more resources to be distributed to an appropriate execution

of the perception-action loops, while slower turn-based strategy games, or story driven role-playing games (RPGs) require more conscious processes to recognize objects in their larger representational context or store visual stimuli for later actions. As Juul (2005, p. 139) has noted, *Quake III Arena* (id Software, 1999) players are known to turn down their graphical settings to encourage faster feedback. In these games, object and character recognition for narrative construction is thus of minor importance compared to the affordances the objects make available.

Acknowledging the player as both agent and spectator leads to some interesting considerations when it comes to game violence. If we assume that different games and different moments in games can encourage our perceptual activity towards our action-executions as agents or towards a narrative, realistic, transtextual or artistic comprehension or interpretation, then we should acknowledge that different violent moments will be experienced differently on the basis of the player's dominant role as viewer or agent (see Van Vught, Schott, & Marczak, 2012). So, a violent act in RPGs will likely be experienced with a greater awareness of who the involved characters are, and what the place is of the violent act in the overall narrative structure of the game. On the other hand, characters and objects involved in violence in a fast paced first-person-shooter will be experienced more for the immediate actions that they afford. Logically speaking, game moments that require a lot of intense motor action will require more of our resources towards them while cutscenes encourage more viewing activity. However, as Klevjer (2002) and Salen and Zimmerman (2004) argue, certain cutscenes can also be seen as a more integral part of the configurative experience since they can present crucial information that help players plan their upcoming motor actions. In this sense, every violent encounter requires a careful analysis. In chapter 5 I will explore several examples more carefully for the type of player activity they encourage and go deeper into the implications of the dualistic role of the player for the experience of game violence.

3.3.2 *Play as Intrinsically Purposeful*

As I explained in the previous chapter, Thompson claims that the act of perceiving an entertainment film is different from perceiving the day-to-day world around us because our perceptual cognitive resources can be employed more freely towards

things that are not relevant for our immediate action executions. In extension, the thing we perceive, is put into a different, unfamiliar (non-practical) light, which would give us a renewed experience of that thing.

This consideration seems problematic for a study of games since games are interactive media that do allow for the execution of motor actions. This would suggest that in games, our perceptual cognitive resources are focused down on those things that are relevant for our immediate action executions rather than dispersed for a non-practical aesthetic perception. While I believe there is certainly some truth in this consideration, it risks oversimplifying the game play experience in two ways. First of all, I have argued above that we cannot consider game play as only one type of engagement. Although games afford motor actions, they also afford the construction of narratives, experiences of realism, cultural references, and artistic shape. In other words, our perceptual cognitive resources can shift from being more focused on action, to being more dispersed for a broader viewing experience.

Secondly, equating Thompson's explanation of perception for action to our engagement with games, risks equating our cognitive perceptual engagement with games with our cognitive perceptual engagement with the real world. I would argue, however, that perceiving for game play action is very different from perceiving for real world actions because our play actions do not serve the type of practical purpose that our actions serve in real life. This does not mean that game play actions cannot have real world consequences. It simply means that any real world consequences are not likely to be the same as the consequences of the action's real world equivalent, and that any real world consequences are of secondary importance to the performance of the play actions themselves. In this sense, I link up with the ideas of Apter (1991) and consider the play activity, similar to how neoformalist film scholars consider the film viewing activity: as purposeful in itself.

This point is worthwhile stressing, because it shows how game action and thereby also game violence is intrinsically different from real world violence. When we shoot someone in a game, no one dies. In fact, no one shoots, at least not in the real world. That moment of in-game violence is only purposeful in the game itself. The violence may help to achieve the game's goals or it may tell us something about the narrative in the game, but it does not serve a practical purpose outside of the game

play itself. Any goals are intrinsic to the game playing itself and when we engage in the violent activity we do so for its own sake.²⁸

In its non-practicality, play still shows similarities with film viewing as it is conceptualized by the neoformalist film scholars. However, for the neoformalist film scholars, the non-practical nature of the viewing experience is important because it puts the perceived thing in an unfamiliar light and further facilitates a process of defamiliarization. In principle, this makes neoformalism an approach to films as artworks since defamiliarization is a tool for judging the artistic quality of a work and focuses the analysis on the more defamiliarizing devices. As I argued in the previous chapter, such a focus is problematic if the aim is to come to a more inclusive formalism in game studies that can account for a broad range of different devices and functions. First of all, presupposing games as art in order to do an analysis of a game's formal devices, risks igniting complex discussions around the artfulness of games. While this is an interesting discussion by and of itself, it is not conducive to a more general discussion of the formal devices in games or the formal devices surrounding game violence. Secondly, the focus on the more defamiliarizing devices risks glancing over a lot of game moments and game devices that are perceived as familiar to us. However, such familiar devices and

²⁸ Here, one may wish to argue that we can also play games for extrinsic purposes, such as winning money or even for social recognition. While this is of course true, I would argue that the game's formal devices do not encourage such extrinsic purposes but rather provide intrinsic goals. Any extrinsic purposes only come secondary to the primary purpose of play just as watching a film is intrinsically purposeful in spite of any other consequences one may wish to connect to the viewing experience (one could hypothetically also watch for money or social recognition). I would thus agree with Apter (1991, p. 16) here, who argues that someone is only playing when the activity is intrinsically purposeful and extrinsic benefits are only secondary to the primary goal of playing. As soon as extrinsic goals become more important than the playing of the game, that person is no longer playing the game appropriately. In that case the person might be going through the physical motions we might (from an observer's standpoint) associate with play, but his actions are not accompanied by the appropriate 'non-practicality' that playing a game should have.

game moments can still be important for the ludic functioning, the narrative, the realism, the transtextual referencing, and the artistic shape of the game. In fact, as also Aarseth (2007) notes, most of our play responses consist of automatized, repetitive actions and perceptions, and while the more unfamiliar, surprising elements are certainly worth analysing (as also Aarseth argues), focusing only on those elements would draw a rather unrepresentative picture of the way formal devices work in games.

Here then, I argue that a neoformalist approach to games rids itself of defamiliarization as a premise and focus point for analysis. Games do not have to be confirmed as art before we can start our analysis, nor does our analytical focus need to be on the more unfamiliar game components. Instead, our analysis can simply rest on a broad conceptualization of play as goal-directed behaviour, narrative construction, experience of realism, making transtextual references, and perceiving the overall artistic shape of the game. This allows us to account for a much broader range of game devices (also the more familiar ones), but it still gives us focus if we assume certain devices to be more important in one of the game's motivational categories (see also the discussion of the dominant above). By substituting neoformalism's reliance on defamiliarization with play, we can look for the devices that are cueing our play responses in all its motivational categories rather than only the devices cueing our defamiliarizing experience. In this case, the player analyst simply needs to fulfil the different predispositions for the game to achieve its ludic, narrative, realistic, transtextual and artistic effects. As players, we embody the backgrounds, skillsets, and motor-actions implied by the game and we demonstrate a general desire to experience all of the game's different effects. In the end however, it is the game that decides. Sometimes, the game may not include devices that cue us to make transtextual references, or draw on notions of the real world. In such a case, we should not force ourselves to find such functions at all costs (such as when Murray tries to construct a narrative from the cues in *Tetris*) but we should take the route of least resistance and simply acknowledge the devices for the other functions that they have. In many modern day videogames, we are likely to encounter different devices with important functions in all of the motivational categories. By drawing on the notion of the dominant (discussed

above), our analytical focus can then be on the more important devices and game moments in these motivational categories.

3.4 The Game in Context

If we follow neoformalist film scholars and assume that players, like film viewers, draw upon background knowledge of the real world and other artworks for recognition of game elements and the extent to which elements deviate from prior knowledge, a neoformalist game approach argues against games as self-contained systems. This differs significantly from ludology since Aarseth argues that games are in fact completely self-contained. As he puts it:

Games are self-contained. You don't need to have played poker or ludo to understand chess, and knowledge of roulette will not help you understand Russian roulette. (...) Knowing *Star Wars: The Phantom Menace* will not make you better at playing *Pod Racer* (Juul 2001). Unlike music, where a national anthem played on electric guitar takes on a whole new meaning, the value system of a game is strictly internal, determined unambivalently by the rules (2004a, p. 48).

While it sounds plausible that a game has the capacity to train the player to understand its cues and perform appropriate responses, such an assumption only makes sense if we adopt a rather limited understanding of play as configurative practice. As I noted above, Aarseth argues that games can indeed enforce certain decisions by distinguishing between successful and unsuccessful ones, but this only goes for the basic manipulations that the player performs to keep playing the game. Play is of course a much broader experience that includes a much wider range of 'successful' motor-actions, some of which are only discretely encouraged. Furthermore, play also includes the construction of a narrative, realistic and transtextual references, and a more overall artistic experience. In all of these cases, the player still draws on notions of the real world, other games or other cultural artefacts and certain aesthetic/game conventions. Without this background information we would be unable to recognize elements in the game. So, if watching *Star Wars Episode 1: The Phantom Menace* (McCallum & Lucas, 1999) does not make us better players in *Star Wars Episode 1: Racer* (LucasArts, 1999) it will at

least make us recognize the Podracers as a transtextual reference to the Podracers in the film.

Furthermore, as also White (2012) argues, games (especially sequels) often rely on the knowledge of certain genre conventions to familiarize the player with the appropriate play actions. In these cases we are expected to already have a basic knowledge of what to do or what to expect when we are told the game is an RPG or a survival horror game. So even on a basic motor-action level, games are still not self-contained. Our experiences with other racing games give us some basic knowledge and expectations that will increase our chances of successful actions in the pod racer.

When we consider that players, like film viewer, bring background knowledge to the game we may wonder whether our use of those backgrounds occurs in a similar way as our use of backgrounds in films. In our activities as player-spectator this indeed seems to be the case. We bring certain backgrounds to the game and make sense of the game in the relationship between our backgrounds and the cues in the game. We recognize narrative and stylistic devices such as characters, character behaviour, causally related events, or a certain point of view, because we test the cues in the game against the background knowledge we have gathered from our everyday real world experiences and our engagements with other artworks. Furthermore, our perceptions of entertainment games seem to be formed against an implicit backdrop of games and other artworks made for practical purposes. After all, without recognizing it as an entertainment game we may confuse *Bioshock Infinite* (Irrational Games, 2013) for propaganda against reactionary, xenophobic, puritan outflows of the Republican Party in the USA. Or we may simply confuse a violent entertainment game for a warfare training simulation. In fact, knowing that the game *America's Army 3* is used as training simulation and recruitment tool for the US Army leads to an entirely different game experience since we become aware of devices whose motivations (e.g. propaganda) are no longer only there to cue the play experience.

Here the neoformalist approach shows similarities with proceduralism. Also Bogost (2006) acknowledges a process similar to background testing in what he considers a simulation. According to him, a simulation occurs between a user's knowledge of

certain processes and the 'less complex' rule-based representation of these processes in the game system (Bogost, 2006, p. 107). Bogost sees the play activity as creating an instance of the game multiple where the components of the system are perceived according to certain preconceived ideas and values of the player. This argument resonates with neoformalism's idea that our backgrounds play an important role in the perception of the film. For games, however, this background testing is not just a perceptual-cognitive process but, as Bogost notes, it also 'takes place within the gameplay, as the player goes through the cycles of configuring the game' (2006, p. 108). This means that the player does not just respond to the system's cues with the application of certain backgrounds, the player also responds to the cues by physically manipulating the game's material. However, the processes through which physical manipulation and background testing occur are still similar to the perceptual cognitive processes. The player also tests his configurative behaviour against the game's action affordances and finally applies those behaviours that bring him the most successful progress. In this sense, the player is continuously trying to solve problems presented by the game's cues by testing different physical and cognitive hypotheses.

While the similarities with proceduralism are clear, the neoformalist approach argued for here, eventually differs from proceduralism in two distinct ways. First of all, Bogost is not so much interested in the way that formal elements cue all of the perceptual, cognitive, and behavioural processes, but he limits his focus specifically to those moments where the background knowledge of the player struggles with the system's rule-based representations. This is what Bogost terms *simulation fever* (Bogost, 2006, p. 132) which is highly similar to the process of defamiliarization that neoformalist film scholars focus on. During moments of simulation fever the player's assumptions clash with the built-in assumptions of the system, which may lead the player to question the system's model or/and his own preconceptions on the matter. Or to put it in film neoformalist terms, when we struggle to understand certain devices, we go through conscious processes of testing and revising our expectations because the game challenges our habitual understanding of the representation and puts it in a new defamiliarizing light (K. Thompson, 1988, pp. 26–28). While a focus on the more difficult to grasp processes in the system is certainly interesting since it helps to lay bare the often ideologically

coloured assumptions embedded in the system or in the player, such a focus is also problematic since it glances over the elements that are more easily grasped. As I already noted above (with regards to a similar limited focus on the defamiliarizing components), such a focus draws a rather unrepresentative picture of the way formal game devices work since much of our play consists of relatively automatized perceptions and actions of familiar game devices.

Secondly, the neoformalist approach differs from proceduralism because Bogost's considers background knowledge and values as highly personal. As Bogost puts it, the instance of play cannot escape 'the grasp of subjectivity and ideology' (2006, p. 99), which becomes problematic when our only access to the game's formal components is through that instance of play. As I argued before, neoformalism does not see backgrounds as highly subjective but rather as historically defined. By assuming that the player exists in a historical context where certain established norms are shared by a large group of players, we can claim intersubjective access to the game's formal devices on the basis of historically shared instances. This does not mean that those historically shared instances are the ways that players empirically play the game. That is not issue here. It only means that we acknowledge that the available background information is historically limited which we then draw upon to study the way that the game's formal devices work in cueing the application of certain information from that more limited set. Consequently, we can claim more and less appropriate play responses within a certain historical time and we can also account for changes in appropriate play responses over time. For instance, with our knowledge of modern day videogames and cinema it is hard to imagine the controversies around the violent arcade game *Death Race* mentioned in the introduction and also the first *Mortal Kombat* games appear pretty harmless compared to many other modern day games. Similarly, rocket-jumping is now a valid and often one of the appropriate playing strategies in first-person shooters such as *Quake III: Arena* or *Team Fortress 2* (Valve Corporation, 2007) because of the currently available information.

Because we assume that the historically defined backgrounds are implied in the game system, the role of the player is close to what Aarseth (2007), following Iser, has termed 'the implied player'. As he puts it: 'The implied player (...) can be seen

as a role made for the player by the game, a set of expectations that the player must fulfil for the game to ‘exercise its effect’ (Aarseth, 2007, p. 132). If we are to follow Iser’s ideas further, the implied player is by no means an ideal player who only needs to activate one already embedded set of effects. After all, this would remove the player from his historical context and would mean that a game encourages one predetermined set of responses in all times. However, the implied player should also not be confused with a real player since real players are of interest to those studying players. Instead, the implied player is a theoretical construct that is necessary for the analyst to study the game but who still finalizes the work by making choices and bringing in backgrounds that the work as a framework for possible decisions leaves open. This plants the implied player as an external reference point in the everyday world with historically dependent knowledge of reality and other artworks (games, films, etc.) to draw upon. The implied player thus activates the game only in one of many ways. However, this does not mean that there are an infinite number of valid activations of the game since the activations are implied by the game’s cues and the background information that the player draws upon is historically determined which makes the appropriate activations limited in numbers. Although this still does not deny the fact that we can (and often will) do different things in a game, the game forces or nudges us towards a limited number of play performances from which we can make claims about how the formal devices of the game work.

However, this argument only holds when we are actually capable of performing according to the game’s plan. What if we simply do not have the skills to do so? Lacking skills may require the player to distribute more resources towards executing the appropriate actions which (assuming that these perceptual cognitive resources are finite) leaves less resources to perceive other narrative, realistic, transtextual or artistic functions of the game’s devices. A skilled player on the other hand, may already have incorporated the appropriate perception-action loop which leaves more room for a narrative comprehension or artistic interpretation. Similarly, very unskilled players may also confuse important ludically motivated devices for important compositionally or realistically motivated devices or the other way around. In a study with parents playing *GTA IV* (Schott & Van Vught, 2013) we for instance found that unskilled players were particularly attuned to the

representational world of the game. This means that these players lacked the ability to clearly distinguish between devices with ludic motivations and devices that are there more for realistic or compositional reasons which lead to players to stop for red lights.

All this thus leads to the question how we can still rely on a limited set of appropriate 'playings' for the analysis of the game's devices if those 'playings' are skills-dependent. It appears that the neoformalist film approach can bring a solution to this problem. According to Thompson (1981, pp. 46–47), also film perception is a skilled activity which means that also films can be perceived differently by viewers with different skill levels. To still be able to make generalizable claims about the film on the basis of her own implied viewings, Thompson argues that we should assume a certain skill level from the viewer when we analyse a film. This skill level is not the level of some hypothetical majority of film viewers, but the skill level required by the film to notice cues such as cutting or camera movement, that are structuring our perceptions. In other words, we should perceive the film with a skill level that allows us to perceive the film appropriately. Also these skills are historically available since we can only acquire the viewing skills from the films available in our lifetime. And because perception is a skill that can be learned, it becomes the analyst's task to point out elements in the film to the less skilled viewer and thereby to encourage a more appropriate perception.

This argument can also be applied to games. Although the skills for film viewing are used for perceptual cognitive processing of narrative and stylistic devices, while game play skills are also used for active planning and execution of goal-directed behaviour, also games require a certain level of skills to be played successfully. Here playing successfully should be considered in its broadest sense for all of our ludic, narrative, realistic, transtextual and artistic play responses. It is this level of skills that the analyst should assume when studying a game since also this skills level, like the background information that the player draws upon, is implied in the game. If we keep dying unnecessarily or keep getting lost for no good reason the game requires a higher level of skills. Similarly, if we run through the game without encountering much challenge, the game implies a lower skills level or in that case

perhaps a higher difficulty setting.²⁹ If we do not assume an appropriate skills level, we could build our perceptions on play performances that do not do justice to the game's design. For this very reason, games allow the player to fit their skills level to different difficulty settings. *Bioshock*, for instance, advises 'Easy' if you are a 'novice gamer or new to shooters', 'Medium' if you are an 'experienced shooter player', and 'Hard' if you are a 'veteran player looking for a challenge'. With these settings the game urges you to fit your skills level appropriately so that you will be able to play the game successfully.

Similar to our film viewing skills, our game play skills increase when we get more familiar with the medium. This means that our skills level increases the more games we play (although it could be argued that some more general skills such as leadership skills or strategic planning can also be gathered from a wider range of day to day activities). Because genre games like first-person-shooters or racing games afford similar action opportunities with similar control schemes, players familiar with these genres will likely have gained an appropriate set of skills for many games in the genre. This means that, like backgrounds, skills are also historically available since we can only learn the skills from a set of games that are available in a specific time in history. In other words, current day videogames require a whole different skills set than an early arcade game like *Pong*.

So, a neoformalist approach to games means studying the game's formal devices by applying the appropriate skills level and backgrounds implicit in those devices to come to a set of reasonable user responses. For games, these reasonable responses do not only consist of the perceptual, cognitive and emotional responses to the narrative and stylistic devices, but also of the planning and execution of goal-directed behaviour. While all these responses can at least in part be considered shared by a group of players since they are implied (and sometimes forced) by the

²⁹ In this sense the relationship between skill and difficulty level can be considered to have an optimal channel similar to Csikszentmihaly's flow channel (1990).

devices in the game, the empirical generalizability of the responses is not of interest here. Instead, the neoformalist analyst only needs the player as an implied theoretical construct existent in background knowledge, skills and motor action abilities to gain intersubjective access to the game's formal devices.

All this of course means that a neoformalist game analyst should also invest effort in familiarizing her or himself with the backgrounds and skills sets that players can reasonably draw upon in response to the games under analysis. For example, controversies around the game *Bully* (Rockstar Vancouver, 2006) arose among parents and teachers because they were under the impression that children playing the game were able to violently bully in-game students with baseball bats and slingshots. In these cases, the game is perceived with background knowledge of the problems with bullying in schools, the ideas of games as primers for antisocial and violent behaviour, and knowledge of the violent content of previous games produced by Rockstar such as the *Grand Theft Auto* series and *Manhunt* (Rockstar North, 2003). With a title like *Bully*³⁰ these backgrounds are easily invoked. However, I would argue that these backgrounds are not the appropriate ones according to the functioning of the game's devices. Once we play *Bully* we find that the game actually punishes us for bullying the weak and rewards us for protecting the weak from other bullies. In this case, a discrepancy shows between these backgrounds and the game's cues, which means we need to revise our hypotheses and draw upon a different set of backgrounds for our understanding of the game. In this sense *Bully* is better understood, as Bradford (2009) argues, in a tradition of works that parody traditional school settings such as *Tom Brown's Schooldays* (Hughes, 1857) or films like *Ferris Bueller's Day Off* (Hughes, et al. & Hughes, 1986) and *The Breakfast Club* (Tanen & Hughes, 1985). Bringing these

³⁰ Rockstar later changed the title to *Canis Canem Edit* for the European market. Although it is not clear why Rockstar changed the title of the game it may well be because the initial title invoked too many negative background applications.

backgrounds to the game shows us how the violence in the game actually functions to revolt against a representation of a stuffy conservative boarding school establishment and even how it helps to challenge class divides between the privileged rich ‘preppies’ and the less fortunate lower class students.

3.5 Conclusion

By exploring the different assumptions of film neoformalism in relationship to ludology and proceduralism, this chapter has presented a neoformalist approach to games. This approach can be seen as an alternative formalism in game studies that focuses on a wide range of game devices, the player as both spectator and agent, and acknowledges the importance of our historical context for the background knowledge and skills sets we draw upon during play.

This approach is first of all a system-oriented approach, interested in the way that the different system components function in relationship to one another to cue our responses. However, the focus is not on the mechanical hierarchical functioning of these components in the system’s design, but rather on the interrelationship of these components as they manifest themselves to the player. In other word, the focus is on the system from a player’s perspective, and from a player’s perspective, rules, narrative devices, and stylistic devices are all experienced simultaneously in no hierarchical order.

Here the neoformalist approach to games differs from ludology which considers the game system as the underlying rule-based system regulating output rather than a system of interrelating rules, narrative, and stylistic devices (Aarseth, 1997). In fact, from a player’s perspective, rules are not the underlying structure but manifest themselves in the form of affordances for actions as well as action encouragements and enforcements. These affordances do not regulate other narrative and stylistic devices but work together with these devices to cue and constrain our play responses.

In this case, function is also considered in a much broader sense than ludologists do. A game device is not just functioning or functional when it plays a role in our configurative behaviour but, following neoformalist film scholars, a device can

have a range of different functions from encouraging narrative construction to triggering transtextual references. This broader function also subsumes meaning, since meaning is seen as one of the game's formal components that can have various functions in triggering our play responses. Here, a neoformalist approach to games also differs significantly from proceduralism which is much more concerned with 'reading' meaning in games.

To structure the analysis of the game's functioning, neoformalism provides useful categories of motivations. These categories turn our attention towards the different justifications of devices on the basis of their functioning in the structure of the game. A device can be there for compositional, realistic, transtextual or artistic reasons. But because games also require goal-directed configurative play behaviour, many devices are also there for ludic reasons facilitating and guiding this behaviour. If we consider that any game sequence can be built up out of a range of different devices with a range of these different motivations, the neoformalist approach to games is also based on a broad conceptualization of play. Only if we consider play to include a wide range of different responses can we focus on those devices and functions cueing those different responses.

Although the neoformalist approach presented here is broadly orientated, it is still focused due to the concept of the dominant. Here, however, the dominant is not based on defamiliarization, as it is for the neoformalist film scholars. Instead, the dominant is simply based on a broader conceptualization of play and considers devices to be more dominant depending on their importance for our goal-directed behaviour, narrative construction, experiences of realism, references to other cultural artefacts such as films or games, and for our experience of the game's abstract artistic shape. In other words, a device or set of devices becomes foregrounded once its functioning is more essential for our play experience in all of its registers. This for instance allows us to focus the analysis on those moments of game violence that are more important to the game's story or our progression through the game, or those devices that are determining a dominant functioning of a specific moment of game violence.

Considering the game system from a player's perspective does of course bring methodological challenges. After all, as interactive phenomena, games are

multiples that can be instantiated in different ways. So, to study the game's formal qualities on the basis of an instance of play, the neoformalist approach argued for here assumes games to be self-regulating systems similar to what Aarseth (1997) and Leino (2010) have suggested. However, different from Aarseth and Leino, I have argued that games do not just distinguish between successful and unsuccessful configurative behaviour, but also encourage other more and less appropriate perceptual cognitive responses (i.e. narrative construction, transtextual references, etc.). As long as we let ourselves be guided by the game's devices, the game multiple encourages (and sometimes enforces) a more limited set of appropriate play instances on the basis of which we can make claims about the functioning of the game's devices.

Also here, of course, play is considered as a much broader activity than just configurative behaviour. In line with other dualistic approaches to game play, a neoformalist approach to games assumes that the player goes through several processes as both agent and spectator. These processes occur simultaneously but are cued to a greater or lesser extent according to the more dominant functions during a specific game moment. For example, dominant ludic functions have us focus our attention on the preparation for and execution of motor actions to achieve the game's goals while more dominant compositionally motivated devices encourage us to adopt the role of spectator and construct the game's narrative.

Since games allow for the execution of motor actions, it could be argued that the way we perceive game content comes close to the way that neoformalist film scholars describe the perceptual processes in our daily lives: focused down on what is of immediate practical relevance. While there is certainly some truth to this with regards to our activities as agents, the analogy does not hold up completely. The reason for this is simple. Our play actions do not serve the same practical purposes as our day to day actions serve because our play actions are still intrinsically purposeful. Any real world consequences come second to the play situation itself, and once they become the primary purpose of play, I align with Apter (1991) and would argue that we are no longer playing the game appropriately. For a study of games and game violence this is important to acknowledge because it allows for a clear distinction between (violent) game actions and actions in real life.

Finally, the neoformalist approach proposed here sees the game as existing in a historical context. This is of great methodological importance for three reasons. First of all, without knowledge of the real world, other representations, and certain (game) genre conventions, we would not be able to understand and play the game appropriately. Secondly, considering backgrounds as historical constructs limits the appropriate play responses because we can only draw on a limited set of information available during a specific moment in history. This, then helps us make more generalizable claims about the functioning of certain game devices during a specific moment in history. Finally, historically determined background knowledge also helps to account for changes in perception and appropriate actions over time. As noted, the first *Mortal Kombat* no longer cues the same sense of realism that it did when it first appeared, and rocket-jumping can now be considered an appropriate action in *Quake* even though it was not part of the gamer vocabulary when the game first came out.

With the adapted neoformalist approach in place, the upcoming chapters will turn the attention to more specific game play and game violence. Here, the neoformalist approach provides the guideline for an analysis of a range of R16 and R18 rated games which helps us come to a better understanding of how game violence works. The next chapter will be dedicated to a study of the game as a system, and considers the devices and their more or less dominant motivations during moments of play. The chapter thereafter broadens the view and also consider the role of the player in greater depth to think about how certain functions encourage our perceptions and performances in a certain way. However, these chapters will not only form applications of the approach for a better understanding of game violence but also function as important testing grounds for the validity of the approach itself. By studying a range of different games, these chapters will show the possibilities and the restrictions of the neoformalist approach to games outlined here.

Chapter 4

Game Devices and Motivations

4.1 Introduction

After outlining the basic assumptions of a neoformalist game approach in the previous chapters, I now shift my focus to its more direct application to games and game violence in particular. For this chapter this means that I apply the neoformalist framework in a study of game play to discuss a range of different devices and the way that these devices influence our immediate emotional, cognitive, perceptual and behavioural responses. Here, neoformalism helps to highlight different narrative, stylistic and rule-based devices and their various functions in encouraging certain perceptions and performances of game violence. All in all, the discussion of such a wide variety of devices and functions enables us to ask questions and raise issues around the workings of in-game violence that other approaches to game violence have overlooked.

As I noted in the introductory chapter of this thesis, other approaches focussing on the formal characteristics of game violence have consisted mostly of social scientific content analyses. Although these approaches are good at quantifying various content categories of violence in games, they lack thorough discussions of these categories and the functions that these categories may have in encouraging our immediate play responses. Even Malliet (2007a, 2007b) who does briefly discuss potential relationships between his content categories and player responses, does so mainly in terms of media effect theories. This means Malliet is looking to answer a different research question, focussing on potential changes in after-effects in relationship to different formal devices.

The aim of this chapter is different. By further engaging with a neoformalist framework, this chapter is not focused on studying different game devices as such, nor on analysing the way that these devices might mitigate or aggravate potential positive or negative after-effects of game violence. Instead, this chapter is driven by the main research question of this thesis and focuses on the way that different

game devices function to structure our perceptions and performances of game content and game violence in particular. This for instance means that this chapter discusses points of view for the ways that they encourage or discourage a certain perceptual identification with a character committing or falling victim to in-game violence. Neoformalism helps us focus on several functions of these devices with the help of its categories of motivations. A first-person point of view can for instance be considered for its ludic motivations since it allows for swift movement but also creates challenges through its limited perceptual field. However, that same point of view can be considered for its realistic motivations since it could be argued to be more perceptually realistic than a third-person point of view. In a similar way devices can also be considered for their compositional, transtextual or artistic motivations.

The devices discussed in this chapter are categorized into narrative, stylistic, and rule-based devices. These categories help to focus the analysis and highlight devices that may otherwise be overlooked. However, the categories are not isolated from one another. Narrative, stylistic and rule-based devices will interact in almost every single case, which means that discussing elements of interest will often have to transgress the boundaries of these categories. For instance, a consideration of characters as narrative devices must also include a discussion of stylistic *mise-en-scène* elements like costumes and of course the character's rule-based action abilities.

Also, the list of devices discussed here is not exhaustive and the different examples below can only highlight a limited range of their different forms. The focus here is motivated by the research goals of this thesis, which means that the selected devices are of interest because they can significantly impact our responses to the game. By drawing on a wide range of different games, I aim to show examples of the many different forms and functions that these different narrative, stylistic and rule-based devices can take and the impact that these forms and functions can have on our play responses. Given the focus of this thesis, and as indicated in the introduction, most of the examples below are taken from games that have received an R-rating (restricted to persons 16 or 18 years and over) in New Zealand primarily or partly because they contain violent content. However, the neoformalist framework also

has the potential to be applied more generally. In my selection of these game examples I have therefore tried to account for a wide variety of game genres to cover a broad range of different games available. However, the focus remains on those genres that are often rated for their violent content such as shooters, action-adventure games, fighting games, and some role-playing-games.

Since I have limited myself to games I have played extensively, the examples are naturally restricted. Although this means that it is impossible to outline all the form variations of the devices at play during moments of in-game violence, let alone during game play more generally, the limited selection does allow me to analyse a couple of games more thoroughly.

This chapter consists of three sections according to the three types of devices we can find in the game. The first part of this chapter (section 4.2) is dedicated to a discussion of narrative devices. After a brief discussion of the ludology-narratology debate, I delve deeper into different narrative devices and discuss the way that narrative elements like opening cutscenes, character conversations or audio messages can establish a context for violence which can function as a justification of that violence, a motivator for play, a cue for strategy building, and also a reference to other artworks and/or our notion of the real world. I then continue with a subsection on the character as an important narrative device. However, because characters are considered as a cluster of characteristics rather than a fictional persona, a character can take on a range of different dominant functions at the same time.

In the second part of this chapter (section 4.3) I discuss four stylistic devices that can significantly shape our experience of in-game violence. First of all, *mise-en-scène* elements like costumes, objects in the environment or lighting can have important narrative and realistic functions by creating an atmosphere for the acts which can make those acts come across as light-hearted or gloomy. However, *mise-en-scène* elements can also have important ludic functions. Weapons for instance, play a very important role in the player's goal-directed behaviour and different weapons can lead to different levels of success, but also different types of violence. Secondly, sound creates atmospheric context. However, sound also has a range of other functions. Sound can help to increase the perceptual realism of the on-screen

representation, and sound also has a clear ludic function by drawing our attention to important on-screen content or upcoming off-screen danger. Thirdly, point of view plays another important role in our perception and performance of in-game violence by encouraging or discouraging different types of identification with our in-game character. And finally, the game's pace can spectacularize the game's violent imagery, showing the impact of bullets and blood splatters in great (cinematic) detail. Furthermore, certain slow-motion devices can also have clear ludic functions by allowing the player to aim better and dodge bullets.

In the third part of this chapter (section 4.4), I explore rule-based devices. This means that I look at the way rules stimulate, force, discourage, and inhibit certain in-game behaviour. In the first part of this section I follow and expand on Ryan (2006) in discussing the different levels- and points of action a game can afford. These levels- and points of action have obvious ludic functions but they can also increase our (behavioural) identification with the in-game character and/or increase our sense of presence in the game world. Finally, in the last subsection I discuss the rule-based devices of rewards and punishments and how our in-game actions can be either optional or obligatory, with optional actions also being able to be encouraged or discouraged by rewards and punishments. These devices have clear ludic functions and help to frame our in-game actions with a ludic justification.

All in all, this chapter explores various rule-based, narrative and stylistic devices in games and the way that these devices function in encouraging certain play responses. Because the chapter uses a neoformalist approach, the game system is considered as a set of interrelating devices from a player's perspective which makes all the different devices, at least initially, equally important. Furthermore, a broad understanding of function helps to consider these different devices for the various roles they play during moments of in-game violence, which can at times be rather paradoxical. From a neoformalist perspective all these devices are triggering our play responses in a certain way which means that in-game violence can be experienced significantly different depending on the combination of devices and their functions during a specific game moment. The different perceptual, cognitive, and emotional focus points that these devices and functions encourage will be explored more thoroughly in the next chapter of this thesis.

4.2 Narrative Devices

A neoformalist analysis of games and game violence in particular cannot escape a consideration of the game's narrative devices. Narrative devices cover discussions around the characteristics of in-game character such as the perpetrators of violence and their targets, justifications of (violent) in-game actions in the form of retaliation or protection, or the narrative consequences of those actions. In other words, narrative devices consist of characters, objects, and spaces in a game that are organized in causally related events.

However, discussing narrative devices in games does require some justification since ludologists like Aarseth (2004a), Juul (2001), Eskelinen (2001), and Frasca (2003) famously argue against any sort of narrative analysis of games. Their arguments generally combine (and often confuse) ontological descriptive claims that games are not narratives and normative prescriptive claims that games should not be analysed in narrative terms. The descriptive claim generally goes as follows: games are not narratives because the interactive nature of games gives them inherently different features from the narratives we know from other types of media like film and literature. The prescriptive claim, on the other hand, which often surrounds the descriptive claim in more politically motivated introductions and conclusions, goes like this: we should not study games in narrative terms since it focuses attention on uninteresting (Eskelinen, 2001) or coincidental (Aarseth, 2004a) features and will make us lose sight of the more essential and interesting ones.

Although ludologists successfully outline some of the differences between games and non-interactive media like films or books, their argument against narrative only holds when games are reduced to rule systems or when the variable character of games somehow disqualifies them as narratives. These two conditions are easily refuted. First of all, games are obviously more than just rule systems. From a player's perspective, videogames consist of rules and audiovisual output that often show extensive fictional worlds with characters engaged in causally related events. The audiovisual output can (in many cases) be considered as narrative (Ryan, 2006, pp. 188–189). Secondly, theatre plays, hypertext fictions, or oral story expositions also produce variable outputs on different occasions, all of which can be considered

for their narrative features. It would thus seem that also variability does not disqualify something as a narrative.

It seems that, as Ryan (2006) also notes, ludologists highlight the fact that game narratives take on a different form than the narratives we know from film or literature, but this does not mean that games should therefore not be analysed in narrative terms. It only means that when we analyse games in narrative terms we should be wary of the more intrinsic qualities of the game narrative and not let classical notions of narrative terms prescribe our analysis.

The root of the difference between game narratives and more ‘traditional’ narratives can be unpacked further with the help of neoformalism’s distinction between *fabula* and *syuzhet* (Bordwell, 1985; K. Thompson, 1988). According to neoformalists, the *syuzhet* consists of the form and temporal relationships that the narrative elements have in the work, while the *fabula* is our mental construction of these elements into chronological, causally linked events, supplemented with broader contextual information like background stories, off-screen space and fillings of spatial and temporal gaps in the *syuzhet*. Neoformalists argue that although many people view narratives as transmedia phenomena, it is actually only the *fabula* that is transmedia while the *syuzhet* takes on different shapes in every new medium (K. Thompson, 1981, p. 38). This goes for games as well. In games, players activate and manipulate the *syuzhet* components such as characters, objects, space, and events through play and then construct the *fabula* out of these components. This *fabula* construction does not take place after the act of play, as Aarseth (2004a, p. 50) has suggested, but is an important part of the act. During play we continuously form hypotheses about narrative elements and test them against the cues that make up the *syuzhet*.

One way in which game *syuzhets* may be different from film *syuzhets* is in their workings of time. Basing his argument on Genette (1980), Juul (2001) argues that in films and literature there is always a fundamental distance between story time and discourse time since the time of the telling is ‘now’ while the events being told have already past. Juul argues that in games, this difference is removed since the events are produced in real time. These arguments are interesting and certainly hold some truth, however they require some nuance. First of all, Juul argues that a lacking difference between story time and discourse time makes games inherently

different from narratives, but it is not clear why a difference between story time and discourse time is an essential feature of all narratives. Admittedly so, flash-forwards and flash-backs are common devices in narratives but we could certainly think of narrative examples that make no use of them. A film like *Timecode* (Figgis, et al. & Figgis, 2000) for instance shows a split screen with four continuous shots, which makes the film completely chronological. Secondly, although Juul certainly makes a good point about how the interactive nature of games leads to chronological narratives in real time, this does not go for everything in the game. The game can still shuffle the temporal ordering of its missions, it can present the player with artefacts that tell the player about past events, and cutscenes can present flash-backs or flash-forwards. This means that players of *Battlefield 3* can for instance play a flash-back which often leads to classic time machine problems where some player actions (e.g. dying) render the present impossible (also see Juul, 2004).

There appears to be an intuitive difference here, between the moment-to-moment play incidents in which a player can indeed die, and an overall scripted game narrative in which he or she (most often) does not. Authors like Salen and Zimmerman (2004) and Calleja (2011) have indeed formalized and explored this difference in their scholarly work. Calleja for instance, distinguishes between scripted narratives and alterbiographies and argues that the scripted narrative is written by the designer while the alterbiography is generated during gameplay (2011, pp. 120–132). Although this distinction makes sense at first glance, it is a problematic one. Since also the scripted narrative still requires player actions to be activated, we may wonder when our actions are generating an alterbiography and when our actions are ‘merely’ activating a pre-written narrative. Here, these authors are unable to provide a clear answer since the distinction is grounded in the player’s narrative experiences rather than in the game’s formal qualities. For Salen and Zimmerman (2004) for instance, any game or game sequence can be experienced as a more personal emergent or an author scripted narrative as long as our thoughts

that accompany our interactions warrant it.³¹ Although Calleja (2011) criticizes Salen and Zimmerman for exactly this issue, he does not succeed to overcome the problem since also Calleja notes that players can ‘absorb scripted events in the world into their alterbiographies’ (2011, pp. 120–132), suggesting that as long as the player perceives the events as part of his personally generated narrative they simply change from scripted to alterbiography.

To distinguish better between actions that are more crucial to the activation (or even potential manipulation) of an overall game narrative and actions that make up localized incidents that are more futile to the overall narrative, I draw on neoformalism’s distinction between free and bound motifs. As Thompson explains, the bound motifs consist of actions more crucial to the progression of the narrative while the free motifs consist of actions that digress from the main plot line (1988, p. 38). In this respect, our actions needed to complete quests in the main quest line are bound motifs while actions in side quests or free roaming actions should be considered as free motifs. In fact, even dying in the game is often a free motif since it has no real crucial role in activating the game’s narrative but only briefly stalls the plot development until the player tries again.³²

This distinction between free and bound motifs is very much a formal one and thereby also replaces the suggestion that certain narrative game elements are more ‘designer dependent’ and others are more ‘player dependent’. Such a distinction namely runs into trouble as soon as our actions are not only crucial to the activation

³¹ See for instance their discussion of the dramatic tension during poker as an emergent narrative (Salen & Zimmerman, 2004, p. 388).

³² An obvious exception here is ‘permadeaths’ that affect the outcome of the game’s narrative. In *Heavy Rain* for instance, any of the characters may die, thereby altering the overall narrative. Another interesting example is *Middle Earth: Shadows of Mordor* (Monolith Productions, 2014) that has an interesting nemesis system in which Uruk enemies rise in rank if they kill you, thereby altering the plot.

of a narrative but also specifically alter the shape of that narrative. In *Bioshock* and *Bioshock 2* for instance, the ending of the narrative depends on the way we interact with the 'Little Sisters' and in a game like *The Elders Scrolls V: Skyrim* (Bethesda Game Studios, 2011) the choices we make will impact the type of missions we can play. In these games our play actions impact the overall form of the narrative. This does not mean that the narrative is in any way more or less pre-scripted than a game narrative that does not allow for such alterations. It only means that the narrative is constructed in the interaction between formal game elements and player effort and that the game is designed in such a way as to make some player efforts more crucial to the development of the overall narrative than other.

The differences between free and bound motifs and the difference between fabula and syuzhet are of great interest for the study of game violence. First of all, free and bound motifs help to establish the more dominant narrative functions of game devices. As I noted in the previous chapter, a bound motif denotes the more crucial devices for narrative construction which means that, in accordance with a neoformalist approach, these are the devices that should form the focus of our analysis. Devices with dominant narrative functions frame the game violence in certain ways. These devices may focus our attention on the narrative role of the perpetrator of the violence or the target. And these devices may focus our attention on the narrative context in which the violence is performed which may or may not provide a moral justification for the violence. However, in discussing these issues we should remain wary of the fact that narrative devices can also have dominant other functions and that other stylistic and rule-based devices will finally also figure in the player's experience of the violent act. This means that a character could very well have an equally important ludic motivation for the player, or that the narrative justification of the violence only plays a minor role in the player's responses to the violence since it is framed with more dominant other functions.

Secondly, it is through the manipulation of the differences between fabula and syuzhet that many of our play responses to the game's narrative can be triggered. If we consider that games can make use of narration in the sense that they can guide the player through the reorganization of the syuzhet into a causally logic fabula (Bordwell, 1985, p. 53), then games can also reveal or conceal narrative information

to the player to cue certain responses. For instance, surprise can be triggered by withholding essential information about characters or passed events, such as when the apparently friendly character ‘Atlas’ turns out to be the main antagonist in *Bioshock*. Curiosity can be triggered by having the game start with a crucial event ‘in medias res’ leaving the player to find out how this event came to pass, such as in all of the *Max Payne* games. And suspense can be triggered by disclosing all of the important narrative events in the syuzhet that could have us anticipate significant outcomes for the characters such as when we for instance feel suspense for the faith of Lara Croft in *Tomb Raider* (Crystal Dynamics, 2013) or Ellie and Joel in *The Last of Us* (Naughty Dog, 2013) (see Brewer, 1996). Furthermore, our feelings of curiosity and suspense can be prolonged by delaying the resolution with free motifs, such as when we have to fight our way through endless hordes of enemies to finally find out who killed Max’s wife in *Max Payne* (Remedy Entertainment, 2001) or to come to the dreaded ‘bossfight’ in *Dead Island* (Techland, 2011).

In this section I thus consider narrative devices as the characters, objects, spaces and events in a game that contribute in some way, bound or free, to the construction of the game’s fabula. With a specific focus on the various functions of these devices, the upcoming sections will specifically explore the roles of narrative context and characters in the ways in which game violence is formed.

4.2.1 Cutsscenes for Context

Many videogames present us with narrative devices that contextualize actions. Given this function, these devices have a clear compositional motivation for being there. Context is usually established in the opening cutsscenes, but other narrative devices such as character conversations, audio messages, in-game text, or even the

game manual or game box can also explain us the narrative context.³³ In the case of game violence, devices generally frame the events and actions within a simple good versus evil dichotomy. They show us how we are about to assume the role of a prototypical hero that has to fight the forces of evil and protect the galaxy, the world, the country, or some individuals from the intentions of evil forces. In the *Mass Effect* series, for instance, the player has to fight the Reapers, a violent race that plans to wipe out all organic life in the galaxy. In *The Elders Scrolls V: Skyrim* the player is set out on a quest to fight the legendary dragon Alduin that is prophesized to destroy the world. In a game like *Prince of Persia* (Brøderbund, 1989), the hero sets out to rescue a ‘damsel in distress’. And of course in most first-person shooter games, the player tries to rescue the country or some countries from an evil occupant or a group of terrorists. In these games, the narrative devices justify the violent action as something that needs to be done (a necessary evil) in order to overcome an even greater evil.

Of course, not all games present equally admirable justifications for the violent actions. Sometimes it seems that violent actions are performed for nothing more than sport or for the personal benefits of an in-game character. *Carmageddon* (Stainless Games, 1997) for instance, lacks any explanation of why the player is rewarded for driving over pedestrians.³⁴ Furthermore, in *Grand Theft Auto IV*, the character’s main motivations for his violent actions are personal gain and revenge.

³³ In Fact, the narrative context is of course also established with the help of contextual information outside of the game. For example, many games are a part of a game or film franchise which means that the narrative context in such a game is partly established through the application of our knowledge of this franchise. In such a case, the game’s formal devices cue us to draw on our knowledge of these other artefacts through transtextual motivations.

³⁴ To be fair, the game is inspired by the cult film classic *Death Race 2000*, which could mean that the narrative context is partly established through the application of our knowledge of the film’s plot. However, other than the title and collisions between highly stylized images of people and a car, the game has completely done away with any reference to the film’s plot and only focuses on the race action.

In *Manhunt* the character is portrayed as a death row inmate killing his way to freedom. And in fighting games like *Mortal Kombat* the only justification for violence seems to be the 'sport' of fighting (and killing) each other for victory. However, once we dig deeper we find that many of these games still present the player with some narrative devices that shine a more virtuous light on the character's misbehaviour. In *GTA IV* the player-character Niko Bellic explains in several cutscenes that the Yugoslav wars in which he experienced a lot of atrocities, led to his cynical perspective on life. In *Manhunt* the narrative devices of cutscenes and audio-messages inform us that the main character is forced to perform these violent actions by a sinister snuff film director to save himself and at a later stage also save the members of his family. And even in *Mortal Kombat* various text sequences inform us about the various motivations characters have for fighting in the tournament. This ranges from rather virtuous reasons such as saving your captured Special Forces unit from the antagonist Shang Tsung to less virtuous reasons like a hostile take-over of the corrupted tournament. *Carmageddon* remains the exception to the rule and really lacks any narrative devices framing the violence as more virtuous. However, *Carmageddon TDR 2000* (Torus Games, 2000), a later instalment in the series, did add an opening cutscene that frames the player actions as the more justifiable job of freeing the world of a zombie plague.

The moral justifications presented by these narrative devices have the potential to severely influence our emotional responses to the in-game violence. In film studies, Smith (1995) has argued that representing a character's actions as morally desirable, or at least preferable over other actions or other outcomes, can stimulate allegiance with that character. In such a case, we are not just spatially aligned with the character in the sense that the information we gain of the represented events roughly aligns with the information that the character gains, but we also can start to form more sympathetic allegiances with that character which can lead to a sympathetic view of violent behaviour (M. Smith, 1995, pp. 74–86). In games, this process is similar. While studying factors contributing to enjoyment of game violence, Hartmann and Vorderer (2010) for instance found that an opening cutscene framing the player's actions as justified significantly reduced feelings of guilt and general negative emotions towards the performed acts. And also Klimmt

et al. (2006) found that players rely heavily on narrative justifications to manage their moral concerns to videogame violence.³⁵

One may wonder though, whether a brief explanation of a hostile invasion or a kidnapping morally justifies the amount of terrorists, zombies or Nazis we kill in games. After all, if we assume that most of us would find murder only acceptable in very rare cases of self-defence or perhaps not at all, then it would seem that no game provides sufficient moral justification for the violent actions it affords. However, such an argument mixes up our sense of what is morally right and wrong in real life and our sense of what is morally right and wrong in the narrative of the game. Just as we are more accepting of morally dubious actions from our heroes in films (Carroll, 1999; Zillmann, 1996), so are we inclined to accept a lot of in-game violence as morally justified that we would condemn as morally objectionable in our daily lives. This is of course because the violent actions and the victims in games are fictional. In this sense, as Carroll has put it, what is morally justified in the work should be seen more 'in terms of the values inherent to the fiction' (1990, p. 138) rather than the values governing our daily lives.

Of course, Carroll talks about fiction films here and it is interesting to consider whether the value system in games functions in a similar way given their interactive nature. For instance, Sicart (2009) has noted that the interactive nature of games, leads to players drawing more on their own value systems since players are actively performing the potentially morally dubious actions. Also Gee (2003) argues that the value system in games that governs our moral appraisal of our character's in-game actions is partly made up out of the values we project onto our character and not just the values that the fiction portrays. This would mean that we are more

³⁵ Klimmt et al. also found that narrative justifications are more important 'if the issue of achievement is not the only salient component of game enjoyment' (2006, p. 319). This makes sense since then other ludically motivated devices start to play an important role in our experience of the game violence.

inclined to compare the moral justification given by the game with what we ourselves would consider a sufficient moral justification for the fictional actions of our character which can lead to interesting ethical play experiences (Sicart, 2009). Although this still does not mean that we evaluate our character's in-game actions according to the values we would hold for real world equivalents of these actions, it does mean that we more critically reflect on the game's moral justification since it has to be sufficient for us to feel right about what we are making our character do fictionally.

As I noted above, because the narrative devices are mostly there to provide story context to the play actions, their motivation should be considered as predominantly compositional. The opening cutscenes, in-game texts, audio messages, game manuals, and character conversations set the scene for the rest of the narrative to unfold. However, because these devices also outline the quest for the player, they also function as a motivator for play actions. This does not give these narrative devices a ludic motivation per se since the opening cutscenes will usually not help the player plan his actions in any detail. However, these narrative devices do present the player with a clear goal to strive for, thereby encouraging the player to perform the necessary violent actions towards achieving that goal.

As Tavinor (2009a, p. 124) notes, videogame narratives are often narratives of discovery or disclosure. This means, as I noted above, that game narratives are often structured to trigger curiosity in the player by revealing narrative information about a murder or the discovery of some sort of mysterious place at the beginning of the game. In *Bioshock* for instance, the player discovers an underwater city at the start of the game, which leaves him curious to find out what kind of a place this city is and what happened there. Similarly, in a zombie game like *Dead Island*, the player wakes up on a zombie-infested island, only to gather more information about the zombie plague during further play. In these cases, our violent actions become partly

motivated by our curiosity to uncover the mystery presented to us at the beginning of the game.³⁶

In other cases, narrative context does indeed have a clear ludic motivation since it encourages very specific play responses in the form of strategy building. This is what Salen and Zimmerman refer to when they discuss cutscenes used as planning tools (2004, pp. 408–410). The cutscenes in the *Hitman* series for instance, provide the player with crucial information necessary (or at least highly valuable) for the proper execution of the target. Furthermore, most games will have cutscenes establishing a particular villain as highly dangerous, thereby encouraging a careful playing strategy, as opposed to a more reckless one, when we finally encounter that character during game play. Also here goes, the more crucial the contextual information is to the proper execution of our goal-directed actions during play, the more dominant the ludic motivation becomes.

The game's narrative contextual information can of course also have other motivations. Many World War II games contextualize the actions as part of historic battles, thereby referencing our knowledge of real world history. Furthermore, the opening cutscene of *Call of Duty: Ghosts* (Infinity Ward, 2013) in which the legend of an elite military unit (Ghosts) is presented in beautiful black and white, also has a clear artistic motivation. Finally, games that are part of a larger media franchise such as the Batman games, draw heavily on knowledge of the films and other games

³⁶ Related to this last point it could also be interesting to consider the impact of the narrative context on our moral appraisal of games and of our playing of them in general. We may for instance wonder whether the promise of fictionally saving a damsel in distress or freeing the world from an alien invasion puts games in a rather virtuous light for those aware of these narrative contexts. On the other hand we may also wonder whether the moral condemnation of games and those playing them could be partly explained by a lack of knowledge of these contexts or the feeling that they insufficiently counterbalance the amount of morally disapproved actions in games. Although these topics go beyond the range of this thesis, a further analysis of these narrative contexts would certainly be able to inform and advance debates around these issues.

when presenting their narrative context, thereby showing clear transtextual motivations.

The point I aim to make here is of course that devices making up the narrative context of the game can still have a range of different functions thereby encouraging different play responses. Even though these devices will most often have dominant compositional reasons for being there, other motivations will likely also play a role in triggering our responses. A further exploration of a variety of different functions will follow in the upcoming sections.

4.2.2 *Characters*

For neoformalism the character is an important device in structuring the narrative (K. Thompson, 1981, p. 38). This means that different motifs and events conglomerate around characters in a story with the protagonist forming the centre of the key events. In this sense characters have important compositional motivations.

Neoformalists consider characters not as some kind of ‘fictional person’ but rather as sets of characteristics, as clusters of traits that concentrate in and around some sort of physical representation (K. Thompson, 1988, pp. 40–41). These characteristics consist of things like looks, name, voice, physical abilities, costumes, moral qualities, dreams, or the actions that the character performs, but also extent to other levels of a film such as the use of musical themes. While I agree with Smith (1995) that these different characteristics still contribute to the construction of a character since they are perceived against a background concept of ‘a person’ (what Smith calls the ‘person schema’), I do wish to emphasize the usefulness of Thompson’s breakdown of a character into characteristics. By acknowledging that the character concept is made up of a variety of different characteristics, we can namely easily pinpoint the wide range of functions that the character may have. For an analysis of videogames, this approach thereby helps to unpack the various roles of game characters as tools for ludic success and focus points for narrative construction.

Focusing on the ludic function of characters, Newman (2002) for instance argues that game characters are very different from characters in non-interactive media since game characters are mediators for agency. In other words, game characters allow players to act in the game world through virtual extensions of themselves. Newman (2002) terms these game characters 'vehicles', similar to cars in racing games. In this case, Newman focuses on playable characters and considers them for the action abilities that allow the player to jump over obstacles, deal with enemies, and generally progress through the game. However, player-characters are not only vehicles for actions. Player-characters are also focal points in the game world around which narrative events conglomerate. In this case, characters are not just considered for the action abilities that they provide but also for their appearances, their relationships to others, their history, their motivations, and their values.

These different character roles can be specified if we consider game characters, in line with Thompson (1988), as a variety of characteristics. Here the focus is neither on the character as a tool for ludic action, nor on the character as a person. Instead, dividing up the character in a range of different characteristics allows us to see how certain traits contribute to the construction of the narrative events while other ones are more essential ludically. For example, the fact that Max Payne is presented as an anti-hero, scarred by the death of his wife and child has no real ludic function but does set the scene for a dark and depressing tale of revenge and self-preservation. On the other hand, Max's ability to enter bullet-time mode has no function in the narrative whatsoever but has a ludic motivation since it helps us aim and shoot better. Similarly, the fact that Lara Croft is a strong female archaeologist sets a narrative in motion but does not add much to our strategic progression through the game. However, her ability to jump relatively long distances plays an essential ludic role since it helps the player overcome obstacles. Aside from the more prominent ludic and compositional motivations, characteristics can also be motivated otherwise. As argued, Niko Bellic's Eastern European accent makes sense realistically, and the visual characteristics of the main character in *MadWorld* can be considered artistically motivated.

All these characteristics with their various functions play their part in triggering our performances and perceptions of game violence. A character's ludic abilities

regulate much of the actions that we can actually perform in the game. For instance, we can only strangle someone with a fibre wire or inject someone with poison in *Hitman: Blood Money* (IO Interactive, 2006) because agent 47 consists of certain characteristics that have the essential ludic function of sneaking up on someone without being seen. Furthermore, the behaviour that other (enemy) characters display, provides the opposition that is needed to sustain challenge during gameplay. Because basic game structures consist of battling opponents or overcoming obstacles, violence is something that the game relies on for substance. As Tavinor puts it, 'characters are obstacles, and how those obstacles are tackled is typically by fictionally killing them' (2009a, p. 165). In this sense, the ludic function of the enemies as obstacles also contextualizes the violence performed on them as necessary play behaviour to be able to continue playing.

Compositionally, realistically, or transtextually motivated characteristics can contextualize the actions as more or less justified similar to the cutscenes and other devices making up the narrative context discussed above. For instance, a cowboy action hero like John Marston in *Red Dead Redemption* (Rockstar San Diego, 2010) is not condemned but praised for his violent actions because he shows characteristics - certain compositionally motivated behaviour, certain friendly and heroic looks transtextually referencing western heroes - that help trigger more favourable dispositions towards him. On the other hand, the evil appearance of game antagonists does the opposite. In their study into how players negotiate moral concerns towards in-game violence, Klimmt et al. (2006) for instance found that players articulated more moral concerns about the violence when the enemies consisted of characters portrayed as friendly or innocent (e.g. children). Expanding on these findings, Hartmann, Toz and Brandon (2010) found that players felt guiltier when they performed violence on game characters whose private social background was known and less guilty when the character's background was not known. In other words, when enemies are portrayed as clear-cut villains, players feel less guilty about fictionally killing them than when the enemies have more ambiguous characteristics or are portrayed as friendly and innocent.

Compositionally, realistically, or transtextually motivated characteristics can also play a role in encouraging certain in-game behaviour. As Gee (2003, pp. 54–58)

argues, aside from possibly projecting our own values onto a player-character and acting accordingly, our actions are also shaped by what we expect our player-character to do in a certain situation. So when our player character Altaïr in *Assassins Creed* (Ubisoft, 2007) is shown to have calm and friendly characteristics, our behaviour is encouraged to be different than when we assume the role of hyper masculine action hero Duke Nukem in *Duke Nukem Forever* (3d Realms, 2011). Even when the two characters would share similar action capabilities. Furthermore, the audio and visual characteristics of enemy characters helps us to identify them as such and thereby helps us to plan our subsequent attacks. Zombies are easily identified as enemies because our knowledge of other zombie games and films tell us that they will try to eat us. The same can be said for evil looking monsters, aliens, enemy soldiers, or terrorists. In *Manhunt*, for instance, the enemies consist of neo-Nazis and mercenaries wearing ice hockey masks and clothing showing swastika-like symbols. One of the reasons that we engage these characters as enemies is that we recognize these symbols as signs of evil. Similarly, boss enemies in games ranging from the *Super Mario Bros.* series to the *God of War* series, are often accompanied with fast paced and chaotic ‘boss music’ which emphasises their evil characteristics and establishes them as serious threats (also see 4.3.3).

These examples also show how the game’s devices indeed encourage a limited set of appropriate play responses as long as we are willing to let ourselves be guided by them. In many cases we already do so since we are all likely to respond with appropriate hostile behaviour to an evil looking monster. In other cases, the cues may be less obvious or more ambiguous. In RPGs for instance, we can have the opportunity to experiment with different appearances, and action capabilities. In *Skyrim* the player can choose between several human races, elf races, and beast races. The choice of race impacts our initial action capabilities and the way that non-player characters engage us. Our actions in *Skyrim* can thus range from the quest of a dragon slaying wood-elf known for his cannibalistic rituals, to the quest of a dragon slaying ‘Breton’ human known for his magic and cooking skills. However, even in such cases, where the set of limited actions is indeed larger than in other games, the game is still not a blank canvas facilitating any kind of play and any kind of story. For example, whatever character the player chooses, all will be equipped with certain attacking characteristics and all characters will eventually be

revealed as 'dragonborn' capable of performing dragon shouts. While these characteristics may differ slightly per chosen race, they still have similar essential ludic and narrative functions that encourage a certain set of limited play behaviour: fight, become the dragon slayer, save the people.

4.3 Stylistic Devices

While stylistic devices have been established as valid analytical focus points in film studies, the term remains somewhat alien to game studies. Nevertheless, I believe stylistic devices can certainly be found in games. So what are stylistic devices? Thompson (1988, p. 43) argues that stylistic devices consist of the techniques of a medium for presenting the narrative. This does not mean that stylistic devices exist independently of narrative devices but rather that they interact with them to cue our perceptual responses. Over the years, film scholars have established a fairly exhaustive set of four categories for stylistic devices in cinema. These are *mise-en-scène* (setting, lighting, costumes, and acting), cinematography (optical effects, framing, and duration), editing (shot-to-shot relations), and sound (music and on-screen and off-screen sounds) (Bordwell & Thompson, 2004, pp. 175–388). It would seem that these categories also exist in some form or another in games. However, with games being quite distinct media, these techniques take slightly different forms and work differently from their cinematic predecessors. As Nitsche for instance shows, the virtual game camera is not actually a camera but a 2D projection plane, which also means that the 'camera' is not bound by any physical restraints and any stylistic effects of lenses, filters, shutters, movement etc. have to be specifically programmed (see for example Nitsche's discussion of lens flares) (Nitsche, 2009, pp. 92–93). However, the 'in-game camera' can still draw our attention to certain elements in the game environment that may be essential for our ludic progression through the game or our narrative construction. Similarly, because camera views are often designed to optimize the player's access to the game world (a dominant ludic function), games make use of relatively little editing techniques and instead present the game world from one continuous perspective. However, there are still moments where the player has direct or indirect access to different camera angles which can have the ludic function to execute actions more efficiently (e.g. the sniper view), or trigger suspense by limiting our view of a

dangerous situation (e.g. the predefined viewing frames in *Resident Evil* (Capcom, 1996)) (Nitsche, 2009, pp. 122–124).

In spite of some obvious differences, the categories of stylistic devices in cinema can be used as reference points to draw our attention to stylistic devices in games. In their film studies approach to games, King and Krzywinska (2002a, 2006a) do just that. They identify point of view (which can include switching between different points of view to achieve a more montage-like style) as an important cinematographic device that structures our perception of the on-screen game world. They argue that mise-en-scène analysis can highlight the atmosphere in which the play actions take place. And they argue that sound can trigger specific emotional effects.³⁷ In this section I adopt these three stylistic devices to see how their different forms and functions can affect our play experiences. However, I also add to these devices a discussion of pace as an important stylistic device capable of emphasizing or deemphasizing certain game actions.

As I noted above, the selection of these devices is not exhaustive but motivated by their ability to significantly impact our experience of game content and violence in particular. Just like narrative devices, also stylistic devices in games can have a significant impact on the way that our perceptual, emotional and cognitive responses to in-game violence are cued. The graphical resolution can make the violence look more or less realistic, the point of view can help to direct our attention to or from the violent act, the use of slow motion can emphasize consequences of violent actions, and the use of certain sounds or music, cues expectations and frames the violence in a certain atmosphere. In his essay on violence in cinema, Prince states that ‘violence on the screen has two components, the depicted behaviour and the stylistic means through which it is presented’ (2009, p. 282). And he argues that

³⁷ King and Krzywinska (2006a) also discuss narrative, genre, iconography and spectacle as film-derived characteristics deserving scholarly attention in game studies. However, these elements do not fall under the heading of stylistic devices.

while ‘the behaviours themselves has not changed awfully much (...) the stylistic designs (...) have changed considerably in ways that make violent behaviour on the screen today more insistent and emphatic’ (2009, p. 282).

It would seem that Prince’s observations about the history of film violence also translate to games. The difference between the first *Mortal Kombat* and the most recent one is not so much the types of actions that the player can perform, since playing with Subzero still allows you to throw ice balls and playing with Scorpion still allows you to throw his spear. Instead, the difference lies in the stylistic devices used to present this violence in higher graphical resolution and with added x-ray vision to show bones crushing and organs exploding. Whether players also experience this violence as more ‘insistent and emphatic’ is not solely dependent on the stylistic devices. It also depends on narrative and rule-based devices, the actions we perform in-game, and the backgrounds we bring to the game. However, Prince’s observation that film violence is largely shaped by stylistic devices remains true for games as well.

4.3.1 *Mise-en-scène*

Mise-en-scène elements consists of the environment in which the action takes place, the objects in the environment, the clothes that different characters wear, the way that the environment is lit, and the gestures and expressions of characters. However, other than films, the mise-en-scène elements in games are not actually things in front of a camera, but animated images rendered in real time and mapped on a 2D projection plane. Nevertheless, all these elements still create a stage for the action and are designed in such a way to create a certain atmosphere, shape our narrative comprehension, show action affordances, refer to our notions of the real world or other artworks, or even just draw our attention to their unusual but artistically interesting form.

In a game like *Condemned 2: Bloodshot* (Monolith Productions, 2008), for instance, Metro city’s decaying neighbourhoods with burning steel barrels placed all over the city streets, neglected apartment buildings, and continuous use of low-key lighting, have important compositional motivations since they set the tone for a dark and eerie tale of a depressed protagonist fighting violent homeless people. On the other

hand, the beautiful brightly lit cloud-city of Columbia in *Bioshock Infinite* gives a surreal feel to the game with both the familiarity and joy of American state fairs and the futuristic jolting and cracking machinery we know from the steam punk genre. These elements provide atmosphere for actions. While the mise-en-scène devices in *Condemned 2: Bloodshot* continuously shape the violent actions as something heavy hearted, the devices in *Bioshock Infinite* make the violence more light-hearted but potentially also more regretful considering the more peaceful society this utopian setting deserves.

Mise-en-scène elements can also function more ludically. As King and Krzywinska (2006a) explain, blood splatters on a wall in horror games generally indicate trouble ahead and, as I noted above, clothing and accessories can make a character into a threat. So, once we move from a brightly lit parking lot into a dark abandoned apartment building in *F.E.A.R.* (Monolith Productions, 2005), we know something bad is about to happen. And when we get sight of a massive zombie in a straightjacket in *Dead Island* we anticipate a tough fight. In these cases, mise-en-scène elements help the player anticipate oncoming danger and thus prepare appropriately.

Also weapons have a clear ludic motivation. Weapons allow us to overcome the challenges that the game puts in our way in the form of enemies. Firing weapons in a first-person shooter like *Battlefield 3* lead to different strategies than the availability of melee weapons (weapons used for hand-to-hand combat) such as knives or a screwdriver in a game like *Hitman: Blood Money*. Furthermore, weapons can also form motivations for our actions. In many games, especially RPGs, better weapons can be found during the course of the game and weapons can be upgraded to increase their effectiveness. In a game like *The Elders Scrolls: Oblivion* (Bethesda Game Studios, 2006), for instance, the weapons become stronger as the player levels up his character skills. So if the player wants to get a very good sword, his best way to acquire it is by increasing his sword fighting skills through combat. In other words, the promise of better weaponry can motivate the player to perform more violent actions in-game.

However, weapons can also add to the narrative of the game. The hidden blade of the character Altair in *Assassin's Creed* or the fibre wire of agent 47 in *Hitman:*

Blood Money, establishes these characters as trained silent assassins and help tell their story. Also, the heavy guns that Marcus Fenix carries in *Gears of War* (Epic Games, 2006) establish him as the prototypical tough guy, while the flimsy handgun and rifle in *Silent Hill* (Konami, 1999) help establish the player-character Harry Mason as an ordinary man. In these instances, the mise-en-scène elements also form a characteristic of the character as discussed above.

As Bordwell and Thompson note, mise-en-scène elements in film are often judged in terms of realism (2004, p. 170). However, in such cases, realism becomes a problematic, culturally, historically and often personally varying threshold that all these elements are judged against which makes us lose sight of all the various functions that these elements can have. Nevertheless, mise-en-scène elements can still be there for important realistic reasons if they are specifically functioning to have us appeal to notions of the real world. Following Prince's (1996) distinction between two kinds of realism, I would argue that they can do so in two important ways.

First of all, a mise-en-scène elements can appeal to our notions of the real world because the elements actually reference things we perceive to be real. Prince terms this referential realism and he indeed argues that 'referentially realistic images bear indexical and iconic homologies with their referents' (1996, p. 32). In this explanation, a representation of a dog can have a realistic motivation but a representation of a dragon cannot. Secondly, a mise-en-scène element can appeal to our notions of the real world when its audiovisual quality is detailed enough to correspond to the norms we hold for the audiovisual representation of three dimensional spaces, characters and objects. Prince terms this perceptual realism and in this explanation a dragon can most certainly still have a realistic motivation as long as its audiovisual qualities are deemed as such.

I should add here that I consider both referential realism and perceptual realism in a mimetic and conventional sense. As I noted in the previous chapters, a device has a realistic function when it leads us to draw on aesthetic conventions of realism (because it adheres to them or breaks with them), and on our knowledge of what our physical reality is like or what we could imagine with a certain probability that

our reality is like (see Shapiro & Chock, 2003). In this sense, the dragon can have a realistic motivation because its audiovisual qualities more or less correspond to what entities look like in our physical world, but also because these qualities form a breakthrough in the graphical qualities of games. Similarly, one of the character's dogs in *GTA V* (called chop) can be considered for his realistic motivation because the fact that you can play fetch with him corresponds to our knowledge of real dogs playing fetch, but also because the dog's behaviour is a lot more realistic than the behaviour of the dogs in *Bully* whose only behaviour constitutes of attacking our character when he gets too close.

Discussions on realism and game violence are often focussed on perceptual realism of mise-en-scène elements like blood and weapons. Perceptually speaking, videogames have indeed become far more realistic over the years and this increased realism has led some scholars (Bensley & Van Eenwyk, 2001, p. 256; Sherry, 2001, p. 424) to speculate that graphically more realistic game violence may be more prone to cueing aggressive after-effects. Furthermore, Ivory and Kalyanaraman (2007) found that the technological advancement in games, defined by increased graphical detail and sound quality, increases our sense of presence, our general involvement and our level of arousal during play. Similarly, in relation to television violence, Potter and Smith (2000) have argued that graphicness can bring viewers closer to mediated violent actions and make it more real and shocking.

Here, however, we should be careful not to overstate the perceptual realism of videogame violence. First of all, even if the graphical qualities of many current games have become increasingly detailed, the imagery is not live-action but animated and, as Ward argues, this makes games very different at the level of 'the ontology of the image' (2002, p. 133). This means that in a mimetic sense, they have a lower level of perceptual correspondence to the norms we hold for the audiovisual representation of realistic three-dimensional spaces, characters and objects. In other words, we are likely to realize that we are looking at something that is computer generated. Secondly, realism including perceptual realism is historically determined, which means that what we perceive as perceptually real and potentially disturbing today, may not be perceived as such ten years from now. In this sense, the moral panic surrounding the first *Mortal Kombat* game can partly

be explained by the fact that the game used sprite-animations made from photographic images which gave the game a highly perceptually realistic appearance for its time. When we play the game now however, the graphical quality is not very realistic at all.

4.3.2 *Sound*

Sound works in similar ways as *mise-en-scène* elements. Sound, whether it is speech, sound effect or music, has important compositional motivation in the sense that it can create atmosphere for actions (see Kiegler & Moffat, 2006), such as when the ominous sounding tones in *Condemned 2: Bloodshot* add to the horror setting of the game, or when the barbershop music in *Bioshock Infinite* cues nostalgia for the simple times of early and mid-twentieth century America. Also, in many war games the music is often grand and orchestral which creates a stage for heroism and virtue. In this sense, sound can also frame the actions as more or less virtuous thereby becoming a context for violent actions as I have explained above. In the many *Star Wars* games for instance, the more virtuous rebel alliance is often accompanied with a rather heroic musical leitmotif, while the galactic empire is framed by the darker sounds of the ‘imperial death march’. Furthermore, the low-pitched voice of the character Darth Vader indicates power and evilness. Or, as another compositionally motivated example, the voice-over in the *Max Payne* games adds Max’s thoughts and feelings to his actions. To put it in Bruner’s (1986, p. 14) terms, the voice-over adds a ‘landscape of consciousness’ to a story landscape that otherwise consists predominantly of action. In these cases, sound as a stylistic device also connects with the character as a narrative device to cue our understanding of the narrative of the game.

Sound can also have important realistic motivations for being there (Grimshaw, 2008). This entails two things. First of all, As Grimshaw and Schott (2007) note, many sounds in games help to create the experience of a 3-dimensional space similar to our real world acoustic ecology. Consequently, the game world becomes more like a real place that we can feel present in. Secondly, the sound in a game can be conceived as more or less faithful to its sources. With regards to film sound, Bordwell and Thompson (2004, p. 365) term this ‘fidelity’ and explain that it has nothing to do with what originally made the sound but rather with the extent to

which the sound fits our expectations or norms. In other words, the sound of a shooting gun needs not come from an actual gun or the sound of piercing flesh needs not come from real flesh being pierced. Instead, these sounds are considered relatively faithful to their sources once they fit the norms that we hold for the sound of a gun and pierced flesh. Because our norms are partly derived from our perceptual experiences of other artwork and games in particular, sounds that have no reference point in the real world can still be experienced as relatively realistic. This is also why Jørgensen (2007) talks of ‘perceptual fidelity’ rather than audio fidelity. So, even though a samurai sword slicing through a body would probably not sound the way it does in a zombie game like *Dead Island*, that sound can still be experienced as perceptually realistic because our experiences of other zombie games and films have created a set of norms that divert considerably from sound that the samurai sword actually makes. In fact, since players expect some sort of audio feedback from their actions, game designers often exaggerate sounds of impacting bullets or knives to adhere to these expectations and cue a greater sense of perceptual realism. Gregersen (2014) even argues that our sense of embodiment in the game may well be dependent on exaggerated sound effects because games often lack the possibility to give other kinds of (bodily) feedback to the player’s actions.

Aside from shaping our narrative understandings or having us refer to notions of the real world or other artworks, sounds also have a clear ludic function. Sounds have us focus our attention on elements on screen (Jørgensen, 2006) or cue our expectations for elements off-screen which helps us prepare for action (Collins, 2008). So, the voices and footsteps of oncoming guards in *Hitman: Blood Money* help us anticipate upcoming danger and stay hidden. The cueing of rapid suspenseful music in *Bioshock Infinite* makes us aware of enemies nearby. And the volume and speaker direction of the growling monsters in the audio-only horror game *Papa Sangre* (Somethin’ Else, 2010) helps us navigate the space successfully.

With regards to this ludic function, the voice-over in the *Max Payne* games also forms an interesting example. In *Max Payne 3* for instance, Max’s voice gives clues about where to go and urges the player forward. When the player takes too long to find a way to open a lock on a door, the voice-over will state: ‘a bullet will

sometimes work as well as a key.’ In this case the voice-over functions ludically because it assists the player in his goal-directed progress through the game. But the voice-over also encourages a fast-paced somewhat reckless playing strategy. For instance, as soon as the player starts to linger a bit, Max’s voice will tell us to hurry up and keep moving. In a sequence where Max is sent out to rescue two kidnapped members of the Branco family, an attempt at exploring the area is for instance met with the following voice-over: ‘I had to move quick or Branco’s next charitable donation would be to the worms’. Max’s friend Raul Passos, who accompanies him on several missions in the game, shows a similar impatience. As soon as the player starts to linger, Raoul shouts things like ‘Hurry up Max’ or ‘What are you doing Max?’. In all these instances, the sound devices clearly encourage a certain pace of action and discourage play strategies like exploring the environment for hidden Easter eggs. However, here the player is presented with contradicting cues since the game does award exploratory behaviour with painkillers or golden guns (also see chapter 5).

In games, just like in films, sound can come from inside the world of the characters, which neoformalists generally refer to as diegetic sound, or from outside of that world which is called non-diegetic sound (Bordwell & Thompson, 2004). However, as Collins rightfully remarks, ‘the relationship of the audio to the player and to their character in games is different from that of film because of the participatory nature of games’ (2008, n. 3). This for instance means that player-characters can react to sounds that are not in their world (non-diegetic) because they are being controlled by the player. Collins therefore further sub-divides the non-diegetic and diegetic sounds as either linear, adaptive or interactive sounds (2008, pp. 125–127). Linear diegetic and non-diegetic sounds are sounds in- or outside of the character’s world that cannot be changed by the player. These sounds generally occur in cutscenes but can also be heard during gameplay when one musical score, originating from either an in-game radio or from a source outside the character’s world, accompanies our entire play session. These sounds which are mainly heard in older arcade games, are there to create atmospheric context for action. Adaptive diegetic and non-diegetic sounds, on the other hand, can also function more ludically by indicating upcoming danger. These sounds respond to game events but cannot be directly influenced by the player such as when the music in *Super Mario Bros.* speeds up

when we are about to run out of time, or when we hear the ominous words ‘Kirov reporting’ once our opponent has built a dangerous Kirov airship in *Command and Conquer: Red Alert 2* (Westwood Pacific, 2000). Finally, interactive sounds are sounds that respond directly to player actions, such as when non-diegetic music changes when we approach an enemy, or when we hear footsteps approaching or the sound of a gun loading. Just like adaptive sounds, interactive sounds can also function ludically. The suspenseful music in *Serious Sam 3: BFE* (Croteam, 2011) for instance, is an indicator of nearby enemies and when we hear the off-screen sounds of radio conversations of the enemies in *F.E.A.R.* we know we should prepare for a fight.

4.3.3 Point of View

In videogames the location from which the on-screen events are shown plays an important role in our perceptual relationship to the on-screen actions. First-person perspectives put the player visually in the shoes of in-game character, merging player point of view with character point of view, while third-person perspectives, or what Nitsche terms a ‘following camera’ (2009, p. 93), disconnect character- and player points of view making the character the object of perception rather than the subject.

These different points of view can have different ludic functionalities. Third-person perspectives, for instance are more suitable for platform games that require a greater sense of where our character is in relationship to other characters, objects and platforms.³⁸ Also stealth games are generally in third-person because that point of

³⁸ An obvious exception here is the free running platform game *Mirror's Edge* which employs a first-person perspective. While this indeed makes jumping between platforms more difficult, the game has tried to make up for this by allowing the player to see the character's body, arm and leg movement from that first-person perspective. This way, the player can still see where the character's legs are in relationship to the platforms.

view allows us to sneak by enemies easier, make sure we remain out of sight, or even peak past a corner without being spotted because the camera can move separate from the player-character. The first-person point of view, on the other hand, helps the player fire weapons more accurately which means that shooters often employ such a point of view. However, also third-person games often allow for switching to a first-person point of view for accurate aim and firing (most notably when using sniper rifles).

Points of view also have clear compositional motivations in the sense that they provide us with a certain perspective on the narrative space thereby also influencing the way that we perceive that space and the actions in it. For example, the first person point of view is often employed in horror games that rely on limited vision to cue our anticipation of a potential startle. In these games we only see a relatively small part of the world which means there is a good chance that something will jump on us from off-screen. Points of view can therefore be considered as a form of narration. As I argued above, games can make use of narration by concealing or revealing certain information to achieve certain responses from the player. In this case, surprise or startle can indeed be triggered by employing a limited point of view of the game world that thereby withholds information about oncoming enemies.

However, the most prominently discussed function of point of view in games and game violence is its presumed realistic function which is often connected to character identification. For example, several scholars studying the after-effects of game violence (C. A. Anderson & Dill, 2000; Dill & Dill, 1998; S. L. Smith et al., 2003; Tamborini, 2000; Tamborini et al., 2004) have suggested that first-person games present us with a perspective that is highly similar to our perspective on the real world which would consequently cue a stronger sense of identification with the aggressor than third-person games and thereby lead to a greater sense of presence in the game world with a closer proximity of the player to the violent act. However, this argument falsely merges perceptual identification with a more general type of identification that involves feeling, thinking, and acting along with the character. In other words, although we may share the point of view with an in-game character we do not necessarily wholly become that character. In fact, Farrar et al. (2006)

found that third-person games, rather than first-person games, tended to increase a sense of presence, which may suggest that showing the player-character on-screen cues another type of identification which is more effective at increasing our sense of presence.

Let me try to unpack the role of point of view in identification a bit further by drawing from Gaut's (1999) ideas about identification as an aspectual process. As he puts it:

the act of identification is aspectual. To identify perceptually with a character is to imagine seeing from his point of view; to identify affectively is to imagine feeling what he feels; to identify motivationally is to imagine wanting what he wants; to identify epistemically with him is to imagine believing what he believes, and so on (Gaut, 1999, p. 205).

For videogames, a similar distinction can be made although I should add that videogames also allow us to identify behaviourally since we can, in certain cases, have direct control over a character's actions (see section 4.4.1). When scholars argue that first-person perspectives in games encourage identification with an in-game character, we should thus ask ourselves, in what aspect?

It makes sense to assume that first-person games allow for perceptual identification with the character since the in-game 'camera' is positioned in such a way to match the eyeline of the character and emphasizes the subjective process of seeing. As Galloway (2006) argues, first-person games can be seen to make use of what film theorist Branigan (1984) has termed the *perception shot* where the difficulty of seeing is emphasized over the clear perception of an object. This means that perception shots can be shaky and blurry when the character is made to look drunk, drowsy, or drugged, or that the vision of cybernetic beings include computer-like characteristics like flashing cursors, diagrams and scrolling text. In many first-person shooters like *Battlefield 3*, the camera jugs and tilts in accordance with the action of the character and sometimes becomes blurred when for instance a grenade explodes in the near vicinity of a character. The perception shot is often even more enhanced by what Bordwell and Thompson (2004, p. 85) call a *sound perspective*, such as when we hear a ringing sound or a slightly muffled sound after an exploding

grenade. It seems that all these techniques are there for compositional reasons to increase the idea that we are seeing what the character is seeing and thus establish a perceptual identification.

Logically speaking this perceptual identification does not occur in third-person games since the camera is positioned behind the character rather than at the character's eye level. However, it is worth noting that while the camera position makes perceptual identification impossible, third-person games still make use of the same techniques that show perceptual subjectivity. In *GTA IV* for instance, the player can direct his character to a bar to get drunk. This drunkenness is then reflected in the character's vision by blurring the camera lens. This seems paradoxical since the player is not presented with the character's point of view but looks upon the player character in a third-person perspective. A similar thing happens in *Tomb Raider* where our vision becomes blurry while it is our character Lara that gets attacked, or in *Hitman: Absolution* (IO Interactive, 2012) where we can switch to our character's 'instinct vision' even though we are not looking through his eyes. These games thus employ certain cues to encourage perceptual identification while at the same time the position of the in-game 'camera' denies a proper establishment of this kind of identification. While this sounds paradoxical, it could be that in these cases the techniques for perceptual subjectivity are not there to cue perceptual identification but rather to increase the chances of an affective identification.

In such cases then, perceptual subjectivity in either first-, or third-person point of view may be one of the few ways in which games can still portray a character's feelings since game characters are otherwise rather flat, focussing mostly on the execution of actions (see Van Vught & Schott, 2012).³⁹ Such techniques may

³⁹ Although game characters generally do not look like they are sad, angry, or happy during gameplay there is an interesting example in *Doom* that shows a small animation of the character's face in our heads-up-display. In this case the face grimaces more and more upon every hit and slowly

indicate certain bodily states like drunkenness or drowsiness that can then encourage us to identify with the character in this respect. However, game developers can employ other techniques as well. Similar to films (see Bordwell & Thompson, 2004, p. 85), games can for instance show hallucinations, dreams or memories of the in-game character. This is for instance the case in the first *Max Payne* game where Max enters a couple of dream sequences and we have him run along seemingly endless hallways to arrive at the death scene of his wife and child. Such a sequence gives us insight into the subjective states of our player-character and thus opens up the possibility for affective identification. Furthermore, the game's imagery can be complemented with a character's internal monologue in the form of a voice-over or some on-screen text, which is the case in *Thief: The Dark Project* (Looking Glass Studios, 1998) or the *Max Payne* games. In these cases, the relatively objective visual representation of action is complemented with audio representing the thoughts and feelings of our character; thereby creating opportunities for affective identification. These various techniques can however be employed equally in first and third person perspective games, which means that a first-person perspective is not necessarily better at fostering affective identification than a third-person perspective.

Also with regards to epistemic identification, it would seem that first- and third-person games do not differ much from one another. Epistemic identification requires us to know the same thing as our character does and in both first- and third-person games this happens automatically since the in-game camera is spatially and

goes more bloody when our character's health deteriorates. The face also shows a malicious grin when a new weapon is picked up and an expression of shock when the character receives an unusually hard blow. Although the facial expressions are relatively few, it could be argued that these are still capable of cueing some kind of affective identification with the character since they give us some insight into what our character is feeling.

temporally attached (M. Smith, 1995, p. 83) to a single character.⁴⁰ In both cases we thus come to know the game world along with the character and find it increasingly difficult to see it from any other point of view.

Perceptual, epistemic, and affective identification can all foster sympathy for or empathy with a character, however, they do not have to. As Gaut (1999) explains, empathy and sympathy require us to feel real emotions in response to the fictional events while these different types of identification only require us to imagine being in the situation of the character (affectively, epistemically, or perceptually). In other words, even though we see (perceptual) and know (epistemic) the game world from our character's point of view and identify with his feelings (affective) by imagining his anger or sorrow, we do not necessarily empathize with him unless we ourselves feel the anger or sorrow that we imagine him to feel.

It would thus seem that the difference between first-person and third-person points of view lies predominantly in the promise of a more complete perceptual identification with the in-game character. Although this is a much more limited understanding of identification than the one that some of the effect scholars referred to above seem to have in mind, we may still wonder whether this perceptual identification is an effective way of encouraging a sense of presence in the game world which would put us closer to the violent act and increase the cognitive, perceptual, and emotional impact of that violence. One argument in support of this idea is indeed the presumed realistic motivation of the first-person perspective. In this argumentation, the first-person perspective is familiar to us since it is similar to the perspective that we have on our day-to-day actions. As Dill and Dill put it:

⁴⁰ I should add that certain games like *Grand Theft Auto V* also allow players to alternate between a couple of different characters. This means that the camera can jump from one character to the other. However, once the camera is fixed on one character, it generally remains there for quite some time allowing us to perceive the events along with the character and build a connection.

In our everyday lives, we do not have a full view of our bodies (...). Rather, we see the world through the window of our own eyes: we see our arms and legs, but not our faces and backs (1998, p. 413).

The familiarity of the first-person perspective could then encourage us to adopt it more easily as our own and step into the world of our character.

However, there is also a counterargument to consider here. Taylor (2002, 2003) for instance, argues against this presumed realistic motivation of the first-person perspective and states that these perspectives are not familiar to us at all since they give us a very unnatural limited view of the game world. She argues that in our everyday lives, our perception of the space we are in is much richer. Not only do we see more (peripherally), we also see within a context of other non-optical registers such as when we sense someone is behind us due to a shift in pressure on a floor or a smell. She therefore argues that the third-person perspective creates a perceptual experience that is closer to our day to day perception since it employs a wider visual field that compensates for a game's inability to stimulate other perceptual registers. If Taylor is right about this, a third-person perspective may be more effective at encouraging a sense of presence than a first-person perspective.

In further support of this idea, Taylor (2003) also argues that a first-person perspective makes identification impossible because the player does not see a character on-screen to identify with. As she states:

the structural design of first-person point of view games (...) dictates that the first-person agent (...) should be within the space of the screen, but only as reflected through the other characters and not as discernible by the player. This is because (...) disembodied first-person characters (...) [exist] outside of the player's perceptual space (Taylor, 2003).

In other words, first-person games encourage us to step into the game world as ourselves rather than identify with the other, but because we cannot enter the game world as ourselves we remain outside of it. Third-person games, on the other hand, are better capable of increasing our sense of presence since we always see our character on-screen and get used to being the other rather than vainly trying to

transport ourselves into the game world. Although I do not think the argument can be made for identification in all aspects since the first-person point of view is still capable of cueing perceptual identification, Taylor does have a point with what Gaut (1999, p. 205) talks about as a kind of physical identification. In this sense, a third-person point of view rather than a first-person point of view encourages identification with a character's physical properties like his or her size, looks, physical position, or physicality of action because we can actually see those properties on screen.

A similar argument can be made for 2D Fighting games like the first *Mortal Kombat* or beat-'m-up games like *Shank* (Klei Entertainment, 2010) that also present the player with a third-person point of view, but rather than spatially positioning the camera behind the character, the camera is fixed on the side line. Since the character in these games is also visible on screen, I would argue that these games are also capable of encouraging a physical identification with the character, similar to other third-person games. However, it could be that, everything else being equal, the 2D characteristics vitiate our sense of presence in these game to some degree because it is perceptually more difficult to assume spatial coordinates in a 2D environment.

It may well be that our sense of presence in the game world is largely cued by our identification with a virtual body since it gives us a real physical extension of ourselves in the game world rather than only a perceptual or affective one. One could of course argue that a behavioural identification (see section 4.4.1) already presupposes a physical identification since behaviour requires a physical body to perform that behaviour. However, in first-person games, bodily behaviour is still only performed by an on-screen hand holding a weapon while other bodily behaviour like running or jumping is only suggested through the movement of the in-game camera. As I mentioned above, this increased sense of presence in third-person games is also confirmed by Farrar et al. (2006) which would mean that third-person games rather than first-person games make us feel 'physically' closer to the violent act.

Finally, the third-person point of view also plays another important role with regards to our experience of in-game violence. Besides seeing the violent act performed by our player-character on other characters, third-person games also

show the violence that other characters inflict on our player-character. In other words, where first-person games only show violence in which our character is the perpetrator, third-person games also show the violence in which our character is the victim. For this reason alone, it could be argued that third-person games show more violence than first-person games. However, the violence against our player-character may also be experienced very differently since we are more likely to hold favourable dispositions towards our character. As Zillmann (1998) argues, we hope for positive outcomes for characters that we like and hope for negative outcomes for characters we do not like. Depending on the outcome of the violent act we then experience either positive or negative reactions to the in-game violence.

I have thus far focused my attention on first- and third-person points of view. This includes fighting games, shooters, horror games, many action-adventure games, stealth games, and most RPGs. However, Nitsche also recognizes the ‘overhead view’ and ‘predefined viewing frames’ as dominant points of view used in games (2009, p. 93). Although these points of view are employed less frequently in games that get rated for their depictions of violence, they do deserve a brief consideration here. Strategy games like the games in the *Command and Conquer* series for instance, employ an overhead view and thereby allow the player to float over the landscape as a kind of all-seeing force. The camera can remain focused on one character or a group of characters when these are selected, but the player can also move the camera freely across the game world not focusing on anyone in particular. Although the camera assumes a position in the 3D game world, it is not fixed to any character in particular which means it becomes more difficult to experience an epistemic identification. After all, our knowledge of the game world differs immensely from the knowledge that any one of the in-game characters have.

In later games in the *Command and Conquer* series (as in most other more recent strategy games), the camera can be used even more freely by zooming in and out on the actions below. This allows the player to gain different perspectives on the actions, framing the action as either more up close and personal or from a birds-eye point of view to emphasize the scale of the event. As Tong and Tan put it in regards to *Ground Control* (Massive Entertainment, 1996):

The gamer becomes, literally, a director of a theatre of war and a director of something like a movie on-the-go. The player can refocus on the action s/he deems most interesting and assume the position of a war reporter, reporting on his/her own battle as it is being staged (2002, p. 106).

The overhead view also has clear ludic functions. With the ability to move freely over the game space, the player can keep an eye on enemy activities and prepare countermeasures appropriately. Similarly, the player can visually explore the surrounding landscape to plan for resource gathering, base expansions or appropriate routes of attack. In many strategy games, the surrounding landscape is only fully shown after a player has directed one or more of his military units to scout the area (the so called 'fog of war'). This makes the functionality of the overhead view directly dependent on other player decisions, making point of view an inherent part of the overall ludic functioning of the game.

Finally, quite a few early survival horror games, such as the first four *Alone in the Dark* games or the first three *Resident Evil* games, employed predefined camera angles. While these fixed camera angles were mostly instigated by technological limitations, since only a static camera allowed the developers to include such detailed (pre-rendered) 3D spaces, these fixed angles became an important dramatizing tool for early horror games (see Nitsche, 2009, pp. 108–112). According to cinematic conventions, low angle camera angles can be used to make a monster look bigger and scarier, shots resembling those made by a surveillance camera can give us the feeling we are being watched, and of course the fixed frame can cue certain expectations due to a specific focus on a door or window or the fact that the frame cuts off the space at a certain position.⁴¹

⁴¹ See (Nitsche, 2009) for more elaborate examples of the cinematic functioning of these predefined camera angles.

With these clear compositional motivations, these predefined camera angles show the greatest similarities with camera use in cinema. In fact, even the constant cutting between different angles comes close to the editing techniques used in films with the obvious exception that the cuts are triggered by the player's movement through the game space. However, these kinds of camera angles are not always the most ludically effective. These angles require a high level of literacy and control since the constant switching between shots can have us lose track of the architecture of the game space or have us direct our character into walls when forward movement becomes sideward movement in the next shot. In this sense, the predefined viewing angles in games have a more dominant compositional motivation since, as Nitsche puts it, 'they do not affect the action but narrate the event' (2009, p. 112).

4.3.4 Speed of Motion

A final stylistic device worth exploring with regards to violence in games is the speed of motion. Speed of motion in games consists of two components. First of all, there is the pre-set pace of cutscenes or in-game animations which can be shown at a normal pace, in slow-motion or in fast-motion. Secondly, speed of motion is also determined by the tempo in which the player decides to play (Wolf, 2001b, p. 86). The player may decide to move faster or slower through a level, linger at certain moments and take in the (violent) imagery. Although this makes game pace more relative to player choice, this choice is still structured by different game devices. These devices consist of the rules and audiovisual cues that function as goals pulling the player forward or as opposing forces holding him back. Davies (2009) calls these elements 'movement impetus' and lists them in an overview. He argues that narrative elements like a threat from behind or an objective ahead help to increase the tempo of play actions. Rule-based elements like a time limit or narrowed down travel options also help to increase pace while lack thereof slows the game down. Stylistic elements like graphically detailed scenery can have the player slowdown in admiration. And mise-en-scène elements and sounds can create atmospheric tension to slow the player down or instead create a sense of urgency to speed the

player up.⁴² Aside from the player's will to move, Davies also argues that game pace is dependent on the level of actual action the player is able to perform. This means that pace and action affordances (see 4.3.1) go hand in hand, with puzzle games usually exhibiting a slower pace than first-person-shooters because puzzle games have different action affordances.

For example, a survival horror game like *Silent Hill* has a slow pace because the game has relatively few affordances that require immediate action for ludic success. In large parts of the game we have no, or only a few flimsy weapons and we spend much of our time walking around a dimly lit environment rather than engaging in combat. Furthermore, the mist and eerie music create an atmospheric tension that tells us we could walk into a dangerous situation at any point. Because the lack of strong weapons makes us quite vulnerable, this tension keeps us from moving forward to quickly. On the other hand, a game like *Serious Sam 3:BFE* has a very fast pace. It generally puts us in a large open environment and sends big hordes of alien enemies running towards us from all sides. These enemies are accompanied by fast-paced music that signifies the urgency with which we will need to act in order to survive. In this case we are able to carry a wide range of strong weapons with seemingly infinite amounts of ammunition, which means we are engaged in the fast paced repetitious actions of spotting and eliminating the threat.

The functions of slowing down or speeding up pace can vary. In the capturing of sport events, slow-motion is often used to show certain moments in great detail. In a film like *The Cell* (Caro & Singh 2000) slow-motion is used to indicate that the events are occurring in a dream. In the martial arts film *Crouching Tiger, Hidden Dragon* (Kong, et al. & Lee, 2000) slow-motion techniques are used to indicate the power of a certain kick or punch. And in *The Matrix* (Silver & The Wachowski

⁴² Davies' exploration of design characteristics encouraging or discouraging player movement is not limited to the ones presented here. For a full list of characteristics see his article at: http://www.gamasutra.com/view/feature/4024/examining_game_pace_how_.php.

Brothers, 1999) or *Dredd* slow-motion indicates perceptual subjectivity of certain characters. With regards to violence however, slow-motion is generally used to dwell on the violent moments and its consequences in order to spectacularize or aestheticize the actions (Bruder, 1998). The shootouts in *Bonnie and Clyde*, *The Wild Bunch* (Feldman & Peckinpah, 1969) or *Hard Boiled* (Kuk, et al. & Woo, 1992) famously showed the violence in slow-motion with the aim of emphasizing both the gruesomeness and the majesty of the violent acts. In these cases, slow-motion has a clear artistic motivation. It makes no sense realistically or compositionally, but is only there to make the violence look artistically pleasing or gruesome.

In games, slow-motion has this same artistic function. In *F.E.A.R.*, *Skyrim*, or the three *Max Payne* games, slow-motion allows the player to be astounded by the graphical detail of the animations of bullets and arrows entering flesh, and body parts jerking in response to the impact (ragdoll physics). In *F.E.A.R.* slow-motion also has a narrative function because it reflects the perceptual subjectivity of the player-character who possesses the superhuman ability to slow down time and give him super-fast reflexes. More dominantly however, almost all the slow-motion in games has a more dominant ludic function. In *F.E.A.R.* and the *Max Payne* games for instance, slow-motion presents the player with a significant tactical advantage. It allows the player to aim more accurately and fire more shots within a certain time frame which helps to deal with large groups of enemies, fast enemies or enemies at a great distance. If handled well, slow-motion can even help to dodge bullets. In the *Max Payne* games, the technique makes no sense realistically or in the narrative. Instead slow-motion is mainly there for ludic and artistic reasons with the ludic reason often being the pre-eminent one.

However, we should be careful not to generalize here. In the most recent *Max Payne 3* there are at least three important uses of slow-motion and not all forms have equal dominant ludic functions. The so called 'shootdodge' in which Max performs a slow-motion jump and the so called 'last-man-standing' in which the game triggers a slow-motion sequence that allows the player time to shoot an enemy that critically wounded Max, both have clear tactical advantages. In these cases, the time of the game world slows down to facilitate the need to urgently dispatch of dangerous

enemies. However, the last form of slow-motion called 'bullet-cam' has a more dominant artistic function. These bullet-cams are automatically triggered when the player fires a shot at the last enemy on the scene. The camera then follows the path of the bullet in slow-motion until it hits the enemy at which point the player is able to keep firing bullets, all of which will be shown to impact the enemy in slow-motion. Because the bullet-cam is triggered by the last enemy on the scene, it does not give us any strategic advantage since we have already successfully made it through the sequence. In fact, the bullet-cam even has the potential to give us a tactical disadvantage because if we decide to keep shooting we are wasting precious bullets that could have been helpful in other situations. Bullet-cam therefore only has an artistic motivation. It is there to frame the action as something aesthetically pleasing; as a spectacle. In line with King we could then argue that in this case the artistic function of the slow pace invites the game player to sit back in a state of admiration and contemplation of the spectacular animation, while fast pace creates a more explosive 'in your face' type of spectacular impact (King, 2002, pp. 56–64).

A similar argument can be found in montage theory in film studies. In her analysis of timing in film, Feagin for instance argues that a long continuation of the same image enables the viewer to 'contemplate more subtle aspects of the story and the characters and to think about why the shot continues for so long' (1999, p. 174). On the other hand, she argues that 'fast-paced montage and rapid cross-cutting often work directly to create feelings of excitement, so that an effect can be produced *without requiring the audience to think*' [italics added] (Ibid., pp. 174–175). In other words, long static shots, creating a slow pace, leave room for reflections on the content, while fast pace leaves little time to dwell upon what is going on. With regards to the function of pace in our perception of in-game violence, this leads to three important considerations.

First of all, if players of fast-paced action games have little time to think about their violent actions, these actions are likely to leave a less lasting cognitive impression than violence that is focused on for a lengthy period of time. In their discussion of suspense in games, Frome and Smuts (2004) for instance argue that games with fewer action affordances and a slower pace allow players to speculate about the

outcomes of the action and reflect on the consequences. This could mean that violence that is concentrated on for a lengthy period of time due to slow-motion animations, the pace of the violent action, and/or the lack of immediate other threat, could leave the player much more disturbed than volatile fast-paced violence. In the long interrogation scenes in *The Punisher* (THQ, 2005) for instance, the player can have his character slowly choke an enemy to death with his bare hands, push him through a wood chipper, or hang him from the ceiling on a rope. These actions last significantly longer than a gunshot and take place in relatively safe places in the game world allowing the player the time to reflect on the violent representation. On the other hand, games like *Quake* or *Doom*, which quickly send us one threatening enemy after the other, leave us little time for preparation for or reflection on the violence but just have us shoot rapidly and repeatedly. In these cases, the fast pace makes the violence volatile; it becomes a quick and painless way of dealing with opposing forces in the game so we are ready for the next onslaught.

Secondly, if a fast game pace contributes directly to our feelings of arousal than pace becomes an important variable to consider in studies into the after-effect of violence in games. In their reflection on violent game effect research, Adachi and Willoughby for instance argue that pace of action is one game characteristic capable of influencing the after-effect of violent games because it 'may be linked to physiological arousal, with faster games leading to elevated levels of arousal' (2011, p. 58). Now, because games that contain violence often have a faster pace than games that do not contain violence, these games could generally be experienced as more arousing. Consequently, with arousal being considered as a condition for cueing aggressive after-effects, it could then be that effect research has actually been measuring the aggressive after-effects of game pace rather than the aggressive after-effects of violence representations.

Thirdly, and perhaps most importantly, game pace also influences the type of involvement we have in the game. Feagin (1999) for instance argues that slow pace encourages contemplation of story aspects and King argues that slow-paced spectacle invites us to marvel at the technologically advanced audiovisual detail and has us 'taken in' by, and thus 'taken into', the fictional world' (2002, p. 57). On the other hand, fast pace will oftentimes encourage a different type of

involvement. As soon as pace speeds up, the graphical representations of enemies or landscapes and the stories that they tell no longer matter that much. What matters more is the immediate threat that the enemies pose to the progress of the player and the actions that the environment and our player character afford for a successful navigation towards the completion of the game. In other words, slow pace, often encourages a consideration of the narrative role of a device or even its artistic or transtextual motivation, while fast pace will often encourage more 'economical' play responses and has us focus mainly on ludic functionality. As elements of movement impetus, pace thus delegates our attentional focus towards specific functions of other devices rather than having clear functions of its own.

However, there is a counterargument to consider here. Grodal (2000) for instance argues that fast-paced action games bring us closer to our optimal mental and motor capacity than slower paced games which leads him to conclude that fast-paced games are better at providing a 'total immersion' because 'less capacity is available for being conscious about the game being just a game' (2000, 204). Although Grodal does not explain what he means by 'total immersion', his argument suggests that a faster pace makes players more involved in the fiction of the game and leaves them unable to reflect on the ludic properties of the medium. While I believe that Grodal makes an interesting point here, it seems to me that his argument falsely assumes that acting in the fictional game world distributes our mental and motor capacity more economically than playing a game in our real world. In other words, when the game requires us to perform a lot of fast-paced action, it is more effective to perform that action as a player than to transport ourselves into the fictional game world and perform that action as an in-game character.

The idea that pace directs our attentional focus seems confirmed by an eye-tracking study by Seif El-Nasr and Yan (2006). In their study of visual attention in 3D videogames, they compared the difference in gaze movement across the screen between a first-person-shooter and a third-person-action-adventure game. They found that the players' eye movements during the action-adventure game covert much more area of the screen while the players of the first-person-shooter focused mostly on the centre of the screen. According to the authors this was due to the fact that 'action-adventure games are relatively slow paced, and most of the time, the

avatar is safe so the player does not have to pay attention to them' (Seif El-Nasr & Yan, 2006, p. 6). The faster pace of the game thus requires us to perceive more economically so we only look at those elements that could immediately aid our progress in the game. Following these findings, we could even hypothesize that fast-paced games do not only emphasize ludic functionality of in-game elements but that in-game elements portrayed outside of the immediate field of vision, meaning outside of the player's goal oriented visual search pattern is not likely to be noticed at all. So a fast-paced first-person shooter may include gory images of corpses hanging from the ceiling but as long as the threat remains on the floor we probably will not take the time to look up and see them.

4.4 Rule-Based Devices

Rules play an important role in structuring our game experiences. Rules limit behaviour and create action affordances; rules allow games to be repeatable; rules turn play action into something goal oriented by establishing winning conditions; and rules allow for competition or collaboration. However, rules are not necessarily more important than other devices. In this sense I disagree with Sicart, who argues that the 'representational aspect of games – its visual and narrative elements - is of secondary importance when analysing ethics of computer games [which includes in-game violence]' (2009, p. 22).

The overemphasis on rules stems from a certain understanding of them. As I noted above, scholars like Sicart (2009) and, more outspokenly Aarseth (1997), consider rules as the underlying algorithms creating and regulating the game's audiovisual output. While this is a valid consideration of rules, it does put rules in a rather dominant position compared to other narrative or stylistic devices. In this understanding, the game system is considered as a rule system while the audiovisual elements are only output of that system, not the system itself. As I argued in chapter 3, I do not consider the game system as an underlying rule system, but rather as a system of interrelating narrative, stylistic, and rule-based devices. This is the game system as it manifests itself to the player.

This consideration of the game system also has consequences for the way rules are understood. From a player's perspective, rules manifest themselves as affordances.

Here I follow Tavinor's approach to rules who indeed argues that, other than in many non-digital games, in videogames rules are mostly encoded in affordances rather than written into a rule book as declarative linguistic statements (Tavinor, 2009a, p. 94). As he puts it:

A game might immediately prompt the player with a declarative objective such as "Steal the armored vehicle," but the subsequent game is not played by consulting various declarative rules to see what actions are legal in the game, and what counts as an endgame, but by simply exploring the potential for action in the fictional world (2009a, p. 94).

This also means that for Tavinor, the game's representational output, what he refers to as the game's fiction, is not a 'mere gloss' but an essential component for the functioning of the game (2009a, p. 95). Here, the game's narrative, stylistic and rule-based devices are inextricably bound together in cueing our play responses. In other words, this understanding of rules as affordances puts rules on equal ground with narrative and stylistic devices.

But there is also another important consequence of approaching rules as affordances. While rules as algorithms are 'fixed' in the sense that they do not change during play (see Salen & Zimmerman, 2004, pp. 122–123), rules as encoded in affordances are changeable. Following Linderoth (2013) I argued in the previous chapter that the choices we make, activate various opportunities for further actions such as when we decide to pick up either a grenade or a knife. Again, this does not mean that we wholly create new affordances since these affordances were always embedded in the system. It only means that we combine the game components in various ways to activate an instantiation of the game in which certain other affordances are available. For example, while rocket jumping may not have been a conscious intention from the designers of *Quake*, it was always possible within the confines of the system. Once players combined the game components to instantiate the affordance, rocket jumping became an often used strategy. With this newly available information, rocket jumping became an appropriate way to play the game.

What this example of rocket jumping also shows is that rules as encoded in affordances are not always known in advance in the way that the declarative

rulebook rules of non-digital games are. This again shows the inherent tie-up between rule-based devices and stylistic and narrative devices. As Tavinor puts it:

the depiction of an initially unknown fictional world allows the videogame to set up games the nature of which can be discovered through fictional exploration or encounters with fictional characters and events, hence guiding a game without the need for explicit declarative rules specified at the outset (2009a, p. 97).

The stylistic and narrative devices thus steer us towards certain actions that are afforded by the game's rules.

As devices at play during moments of in-game violence, rules will often have important ludic motivations in the sense that they confine and facilitate the player's goal-directed play actions. However, they can most certainly have other dominant motivations. Rules also create affordances for actions that are more important for narrative construction, such as when we can pick up and read or listen to diary excerpts of in-game characters in *Gone Home* (The Fullbright Company, 2013) or *Bioshock*. Similarly, rules can have important realistic motivations such as when we can go to a bar and get drunk in *GTA IV* or when we can take Chop the dog out for a walk in *GTA V*. Rules can even have artistic or transtextual motivations, such as when we can get to move the snake around the dreamlike environment in *Flow*, when we get to play with Tim from *Braid* or when we collect enough bandages in *Super Meat Boy*.

In the two subsections below I consider two ways in which rule-based devices operate in games. First of all, rules limit our action opportunities by providing certain points of actions in the game world. This simply means that rules may allow the player to perform certain actions in, or on the game world, such as controlling our player-character's movement directly and shooting other in-game characters, or issuing orders to a group of military units by selecting and clicking on the game world. These afforded actions are always a limited selection of a larger range of actions that 'could have been'. In other words, the existence of certain rules creates certain types of action affordances while the lack of other rules denies other actions. As I will argue under section 4.4.1, the type of actions the rules make possible can

have a significant impact on the way that in-game violence is structured. An internal point of action allows us to perform violence through direct control of a virtual body such as in first-person or third-person games while an external point of action places us outside of the game world where we only have indirect control over the violent situation.

Secondly, rules as encoded in affordances do not only prescribe what must be done for ludic success but also what can be done or may be done. In Suits' terms (1978) rules are prohibitive and constructive. In this respect, not all rules are binding in the sense that they have to be followed in order to progress in the game. Some rules simply state a possibility rather than a binding constraint and it is during these moments that other motivations can come to the fore. With regards to game violence this means that rules make certain actions ludically obligatory since these actions are needed to achieve success. One could argue that ludically obligatory violence leaves the player less accountable for his actions because he simply has no choice but to perform these actions if he intends to keep playing. On the other hand, certain ludically optional actions can still be ludically encouraged or discouraged through rewards and punishments. Finally, violence which is optional in a ludic sense can of course still have important narrative, transtextual, realistic or artistic functions.

4.4.1 Points and Levels of Action

In scholarly articles on media effects, a commonly mentioned characteristic that may either aggravate (Polman, Orobio de Castro, & Aken, 2008), or mitigate (Goldstein, 1998)⁴³ potential negative after-effects of game violence, is the active participation in the violent act. According to this idea, videogames allow us to act out the violence ourselves through control over our player-character's behaviour,

⁴³ While this may sound counterintuitive, Goldstein explains, from an arousal equilibrium perspective, that our perceived control over the events could also reduce potential stressful effects of these events since we are more in charge of the level of arousal that is elicited (1998, p. 60).

while non-interactive media like films have us watch someone else commit the violent acts. Although this idea may seem intuitively right, it simplifies rather complex concepts like ‘active control’ over a character’s actions and the sense of being ‘present’ in the game world. After all, not all games allow for the same level or type of control over the violent actions and even if there is direct control over a character’s actions, that does not necessarily mean we identify with that character in other aspects.

To structure the different action affordances of games, Ryan proposes four different types of interactivity based on two binary pairs: *internal/external* and *exploratory/ontological* (2006, p. 107).⁴⁴ The distinction between internal and external interactivity is a useful one and describes the way in which the player either acts *on* the game world by navigating an interface with the control of a cursor, or acts *in* the game world by directly controlling a player character. In first-person or third-person shooters or action-adventure games, the player is generally presented with an internal point of action. This point of action maps the player’s motor commands (in real time) onto a virtual body inside the game world where the action occurs.

Referring back to Gaut’s (1999) ‘aspectual identification’ we could argue that an internal point of action can cue a kind of ‘behavioural identification’ with the virtual character where we imagine ourselves to be performing the actions that we have our in-game character perform. If this is the case, an internal point of action could increase our sense of being present in the game world and puts us in closer proximity to the violent actions. If our player-character is the violent perpetrator,

⁴⁴ As acknowledged by Ryan, this categorization comes close to Aarseth’s (1997) categorization of different user functions in ergodic texts. However, I’m exploring Ryan’s distinction here since her distinction emphasizes the player’s relationship to the game world which means she explores affordances from a player’s perspective during an instance of play rather than the way the game’s underlying structure facilitates certain player action (see Ryan, 2006, p. 107).

we are then imagining to vicariously perform the in-game violence with him or her. However, I should stress imagination here, since this still only makes us imaginatively violent and not really violent since our own actions still consist of fairly neutral keyboard manipulations and mouse movements.

It could even be argued that the discrepancy between neutral player actions and violent character actions stands in the way of a behavioural identification and disturbs a sensation of being present in the game world. When a gun affords firing, we do not fire it but we click our mouse, and when a car affords driving we do not drive it but we press the w-key. For this reason, Gregersen and Grodal (2009) distinguish between the primitive actions, or P-actions performed by the player and the virtual actions performed by the character. They indeed note that P-actions are often highly generic and stylized and do not in any way resemble the actions represented on screen. However, they also note that the P-actions, although arbitrary, are often natural which means they should be internalized as code and should not require much conscious attention.⁴⁵ If that is the case, then an internal point of action can most certainly cue a sense of presence in which our phenomenal action space shifts from the actual space in front of the screen where we are engaged in arbitrary button pushing to the virtual space on screen where we are engaged in fighting or shooting.

Ryan's (2006) external point of action is usually found in strategy and simulation games like the *Command and Conquer* series. In these games, we may issue orders to one or more character(s) but the point from which we issue these orders is a point outside of the world of these characters. This creates a somewhat paradoxical situation where in-game characters respond to commands from a cursor that is

⁴⁵ I should add here already that certain game elements like QTEs do not follow this rule of thumb. In fact, QTE are made to be particularly unnatural to make the button combination more challenging. Also player skills are obviously a determining factor in how natural game controls are (see below).

clearly not part of their world.⁴⁶ Instead, the cursor exists somewhere on an interface between our real world and the world of the characters. When actions are performed, the player selects a character or a group of characters and orders them to attack enemies or an enemy base. Once the order has been issued, the player can sit back and watch the battle unfold (intervening with other commands when deemed necessary). A similar external point of action is found in classical turn-based combat in role-playing games. Once it is the player's turn to act, he or she issues one or more commands to the character and watches as the character performs the violent actions. More so than in games with internal points of action, the violence in these games is dependent on pre-established animations that the player cannot influence. External points of action thus make us only indirectly accountable for the violence and put us as an external force outside of the world where the violence is performed.

Quick-time-events form an interesting example of a specific game moment with external points of action. While a game like *Max Payne 3* predominantly presents the player with an internal point of action whereby the player directly controls the movement of Max in real time, the game also contains QTEs in which the player is cued to press a specific sequence of keys in order for a pre-rendered animation to reach its desired ending. Although the keys correspond to certain actions of the character, they do so indirectly. The game presents the player with an interface in which the required keys are shown in sequence and the player performs the actions on that interface. Because the key sequence is purposefully counterintuitive, the player is cued to focus his attention on performing the appropriate P-actions which would then disturb a sense of presence in the game world.

⁴⁶ This transgression of boundaries between clearly separated worlds has been termed 'metalepsis' in narratology (Genette, 1980, pp. 234–237). In the *Command and Conquer* games this metaleptic shift is enforced when the in-game characters respond to the player's order by saying things like 'Yes sir' or 'Affirmative'.

Ryan's distinction between exploratory and ontological interactivity is more problematic. This distinction describes the different types of changes the player can make to the game world. According to Ryan, exploratory interactivity allows the player only to navigate the game world without making any changes to it, while ontological interactivity allows the player to make alterations to the world by picking up objects or interacting with characters (Ryan 2006, 108).

Although this distinction might intuitively make sense, it incorrectly distinguishes between exploring and altering. As I noted in chapter 3, games are interactive in the sense that the player can change the arrangement of the game's formal components through motor actions. However, contrary to what Ryan suggests, the player does not change the game's formal constituents but only activates a different arrangement. When a player shoots a character, that character is not somehow deleted from the game's code. Instead, the character is still there but at that particular point is simply replaced by a dead version of him- or herself. In other words, the player activates a different version of the character similar to how the player activates a different perspective on the world by moving through the environment.

This, of course, has consequences for the consideration of interactivity here. While I largely agree with Lopes' understanding of interactivity as being about changing the 'structure' of the work itself rather than about changing the structure as users experience it (2001, p. 68),⁴⁷ his distinction between 'strongly interactive' and

⁴⁷ This, to me seems to be an essential characteristic of interactivity which also means that I disagree with Grodal and Frome who argue that interactivity is about changing 'mental states of the player' (Grodal, 2003, p. 143) or the structure as 'audiences experience it' (Frome, 2009, p. 3). In such an understanding, interactivity as a concept becomes so broad that it no longer allows us to distinguish between interactive artworks like games and non-interactive artworks like films or paintings (unless one is willing to go back to a kind of romantic intentionalism as Frome does). If Grodal and Frome were right here, many other phenomena like fine art, literature and films can be included under the umbrella of interactivity that are commonly not considered to be interactive at all.

‘weakly interactive’ is problematic for the same reasons as Ryan’s distinction between ontological and exploratory interactivity is. If we assume that the game’s structure consists of the arrangement of its formal properties, there is no reason to assume that changing the structure is different from activating a set of formal components in a different temporal order, as Lopes suggests.

However, there may still be some validity to this distinction. Although Lopes’ explanation of strongly interactive and weakly interactive works goes awry, it could well be that in certain interactive works the user will always encounter the same set of formal components, be it in a different order every time, while in other interactive works, the user draws from a larger set of components and only instantiates a certain selection. This would indeed suggest that in the latter case, the player has many more options to choose from which would consequently lead to a greater sense of agency. I will just refer to this here as the *level of actions* a game affords, whereby a higher level of actions refers to games with a large set of game components that can be instantiated in parts or as a whole in a wide variety of ways, while a lower level of actions refers to games that often have a smaller set of components that can only be instantiated as a whole in a limited number of ways.

The level of actions that a game affords can also influence our sense of presence in the game world and thereby our proximity to the in-game violence. Games that have a higher level of actions will often increase our sense of presence while games that have a lower level of actions will decrease it. This is because our experience of being in a world comes with the ability to perform a vast range of different actions. In our day-to-day world we can pick up items, move items, dig a hole, open doors, make fires, talk to people, and do a whole lot of other things. Therefore, the more the game world replicates the many action affordances of our real world, the more the game world feels like an actual place that we can be in.

Aside from influencing our sense of presence in the game world, action affordances often have important ludic functions. Games with a high level of action affordances and an internal point of action allow the player to walk, run, crawl, jump, shoot, and dodge his way to success. These games allow players to overcome a wide range of obstacles in the form of enemies, closed doors, blocked paths, or deep pits. On the other hand, games with external points of action often afford different, less detailed types of actions. A strategy game like *Command and Conquer: Red Alert* (Westwood Studios, 1996) for instance, does not allow the player to perform detailed tasks like jumping over cliffs or stacking boxes, but it nevertheless has a high level of action affordances since it does allow the player to command various army units to do a great variety of different things and even operate the army as a whole with a few clicks of the mouse.

In most cases the rule of thumb is that the higher the level of actions is, the more options the player has to overcome challenges and reach the game's goal. In other words, the player is afforded a wider range of different action opportunities, many of which can have an important ludic function because they allow for different strategies to come to success. However, a higher action level also means that some of these actions will not be important for progress in the game at all. In a game like *GTA IV* for instance, the player is provided with an incredible wide range of action affordances, many of which will only very rarely (or not at all) have an important role to play in the player's route to success. The fact that the player can go to a carwash for instance, is ludically unimportant in all but one mission in the game. Nevertheless, the game does afford this action and even provides an extensive cutscene every time the player decides to make use of it. Aside from the mission *Clean Getaway* the car wash has a more important realistic or even aesthetic function. It references car washes in the real world but also provides a player with a clean and shiny vehicle providing aesthetic pleasure for the player.

The level and points of action have obvious consequences for the type of violence performed. Games with different action affordances allow for more and different types of violence with various functions. In the *Hitman* games for instance, which have a high level of action affordances and an internal point of action, the player can decide to shoot a character, inject the character with a lethal poison, stab a

character, strangle a character, push a character down a cliff, or drop a chandelier on top of him. Most of these affordances have an important ludic function in the sense that they all can play a role in the player's road to success. On the other hand, in a game like *Alan Wake* (Remedy Entertainment, 2012) there is no option for melee combat and the player can only attack oncoming enemies by shooting them. This does not only limit the types of violence that can be performed, it also contextualizes such violence in a different way. While this limited action affordance has an important ludic function and forces the player into certain strategic decisions, it can also lead to frustrating moments when the player-character runs out of bullets and leaves us completely helpless when more enemies attack.

In general, games do not just afford one level of actions or one point of action. Many shooters or action adventure games include quick-time-events that allow for less player input than the regular gameplay, and role-playing games like *South Park: The Stick of Truth* (Obsidian Entertainment, 2014) shift the player's point of action from internal to external as soon as a combat sequence starts. This means that also during one particular game, our perceptions and performances of in-game violence can shift significantly. Any study looking at the potential impact of in-game violence should therefore be mindful of the action affordances that frame the violence at any one point in the game. After all, even though a game like *The Walking Dead* (Telltale Games, 2012) has similar bloody and gory content as the *Left 4 Dead* games, its point and click interface makes the experience of the violence a radically different one.

4.4.2 Rewards and Punishments

Games structure our play behaviour through rewards and punishments. As noted above, these devices do not only tell the player what he must do but also what would be wise or unwise to do without forcing the player to perform one type of action. For a study of violence in games, this distinction is extremely important because it shows how some violent actions may be more optional than other ones. Frasca acknowledges the different functions of rules in this respect and argues for a distinction between *manipulation rules* that 'state a possibility' and *goal rules* that are always 'mandatory' (2003, p. 232). Juul (2007b) makes a similar distinction with regards to game goals and claims that *Scramble* (Konami, 1981) is a game

with *obligatory goals* because the player is forced to work towards them, while *Grand Theft Auto: San Andreas* (Rockstar North, 2005) on the other hand, is a game with *optional goals* because the player is free to deviate from them. In other words, although the rules in a mission in *Hitman: Blood Money*, require players to kill certain individuals to proceed to the next mission, how they decide to kill these individuals and how many more other characters they kill along the way is up to them.

The distinction between optional goals and obligatory goals seems useful when looking at the optional or mandatory characteristics of game violence. However, the distinction needs to be refined a bit further. After all, even though indiscreetly killing other people on the way to our target in *Hitman: Blood Money* is an optional goal, doing so is likely to decrease our chances of success because it would raise the alarm and send guards looking for our player-character. Leino (2007) therefore accepts this distinction between optional and obligatory but draws it away from goals. Instead, Leino proposes a division that incorporates all of the game content by connecting it to his gameplay condition (those things we need to do in order to keep playing). Leino then talks of *undeniable content* when it is the crucial content that we are forced to take notice of, because denying this content would decrease our possibilities to act in the game. On the other hand, *deniable content* is that which can be denied without any immediate or future punishment that would affect the ability to keep playing. As I have argued above, Leino links up game content to our ludic progress, outlining what is ludically dominant and what is not.

However, also here the distinction can be refined a little more. While Leino helps us focus on a broad range of game content, his distinction remains a rather harsh one. His distinction does not focus on different types of rewards that may not have an essential role in fulfilling the gameplay condition but may still have a ludic benefit. In other words, these elements are not undeniable per se since we can also progress through the game if we take no note of them, but they are not ludically irrelevant since they may still provide us with a reward. For example, while discretely killing innocent characters on the way to your main target in *Hitman: Blood Money* does not give you any set back, the game still rewards us with higher scores and special weapons if we manage to only associate the assigned targets.

Similarly, you can very happily finish *New Super Mario Bros. Wii* (Nintendo, 2009) and save the princess by denying all the star coins spread around the different levels, but the game does encourage you to collect them by rewarding you with unlocked levels in a secret world. In these cases, the game does encourage certain actions over others but does not discourage these other actions with a punishment that would affect the ability to keep playing. Or, to put it differently, in Leino's terms the content is deniable, but the game is not neutral about it since it provides a ludic reward.

In other cases, the game may even punish and reward us at the same time. For example, driving over pedestrians with a car in *Grand Theft Auto IV* is likely to trigger a response from police or gang members, which can form a major inconvenience when we are trying to successfully finish a mission. However, pedestrians also leave behind money when they die which can be picked up to buy new weapons and ammunition. In this case, driving over pedestrians should be avoided if we want to keep playing the game, yet, paradoxically, we are also encouraged to do so if we want to earn money. In Leino's terms it is undeniable content that needs to be avoided, yet it is also ludically encouraged because it provides us with an optional ludic incentive which may impact the player's strategy and subsequent actions.

The game's rules can of course also be neutral about certain content that is neither undeniable because it is not punished with a decreasing ability to keep playing, nor encouraged with optional rewards. This content is indeed completely ludically deniable and it is only there for other (e.g. narrative, realistic, transtextual or artistic) reasons. In a sequence in *Bioshock 2* for instance, the player moves his character across the ocean floor alongside the underwater structures of the city of *Rapture*. At approximately the halfway point, the player can stop to look through a window and observe a violent encounter between a *Big Daddy* character and a couple of *Splicers*. Watching this scene unfold gives the player a better understanding of his own player-character (which is also a *Big Daddy*) and the narrative of the game. However, the fight is completely deniable. The player can simply decide to keep walking and not take any notice of it. Doing so will not give the player any disadvantage or advantage during further play.

The level in which the portrayed or performed violence has a ludic function can significantly influence our perceptions and performance of that violence. As a necessary element of the game, undeniable violence has a strong ludic justification for the player. This means that we do not necessarily have to justify the violence in any other way than to state that we wish to continue playing. In this sense undeniable violence may lack significant conscious reflection from us about the motivations for performing these actions.

However, this is certainly not always the case. As players we can still experience moral dilemmas around our choice to play the game at all. In such cases we struggle with the type of actions the game forces us to perform. In *Manhunt* for instance, the player is given the option to perform his executions in three different levels of 'gruesomeness'. Although choosing the most gruesome execution level remains optional in most of the game, in the level 'Doing Time' the player is forced to perform the highest level gruesome kill with a hammer and a baseball bat. In this case, the violence is required in order to proceed to the next level. But although the game justifies the violence ludically, the gruesomeness of the act will likely leave us to question the validity of this justification. As Sicart (2009) argues, it is exactly because of this tension between the values of the player and the justification provided by the game, that *Manhunt* can be such a rich ethical experience. Or, to put it differently, the fact that we are forced to perform morally dubious actions in the game raises the question of when something ceases to be 'just a game' and starts to become morally inappropriate behaviour.⁴⁸

⁴⁸ Here a brief note is in order. As I argued in the introduction, the focus in this thesis is on physical violence and not on sexual violence for instance. This is important to keep in mind because the extent to which the ludic justification can either be perceived as sufficient or perceived as valid enough to (at least) create a struggle with our own value system may differ greatly when we are talking about sexual abuse or rape. In such a case, our own value system will likely make any ludic justification obsolete.

The ludic justification can also be found in optional violence that is encouraged through reward. The gruesome execution level in *Manhunt* for instance, although optional in most of the game, is still encouraged with more points. In this case, the player may wish to take this reward as a justification for the violent actions, but since these points are part of a completely separate reward system that plays no further role in the game, it could well be that this violence is preceded by a more careful process of conscious decision-making. In these cases, the moral dilemma does not revolve around the decision to play the game at all but rather around the actions the player decides to perform in that game. As Zagal wonders in reflecting on exactly this issue: ‘how far would you go for a few points more?’ (2010b, p. 242).

A similar point can be made for violence that is completely undeniable and therefore does not receive a ludic justification at all. This type of violence will only be justified within the narrative of the game, or by the player drawing on connections with the real world or other artworks. Also here, any moral dilemma concerns the player’s active decision to perform the violent act or not. In the famous *No Russian* mission in *Call of Duty: Modern Warfare 2* (Infinity Ward, 2009) for instance, the player is completely free to participate in the killing of innocent civilians in an airport. Because the game does not ludically enforce us to perform the violence, our decision to partake in the killings are based on other game devices. The game’s narrative devices for example specifically frame the actions as something evil, explaining that your character is undercover in a terrorist organisation. This may thus provide us with a nudge to refrain from shooting. However, the decision to partake in the shooting is still our own since the game does not enforce us in any way. In other words, any moral dilemma revolves around shooting or not shooting rather than around playing or not playing the game.

4.5 Conclusion

This chapter has provided an overview of various devices making up and surrounding moments of game violence. However, rather than quantifying these components as many previous formal content analyses have done, the neoformalist approach applied here considers the functions that those formal components can have in encouraging our immediate play responses. Furthermore, by considering

the game from a player's perspective as a set of interrelating components rather than an underlying rule system, the approach also distinguishes itself from a ludological approach and allows for a more balanced consideration of the different components. In this approach, rules are not considered as the underlying algorithms but rather as the affordances manifested to the player which puts them on an equal footing with narrative and stylistic devices. Consequently, this chapter has put some effort into thoroughly and equally exploring these three categories of devices. Finally, the focus on a wide variety of functions has allowed this chapter to move away from a focus on just the ludically important, just the narratively important, or even just the semantically important (which is where the proceduralist focus lies). Instead, the neoformalist approach allows us to focus on a range of five different roles that devices can play in cueing our responses, all of which can be present on their own or in combination with other ones in a specific device.

As narrative devices, a game's opening cutscene can for instance have a clear ludic motivation when it encourages strategy building, thereby playing an important role in the player's goal-directed, rule-bound behaviour. As I noted, many of the cutscenes in the *Hitman* series have such a function since they give us information about our objective to kill a certain target, the whereabouts of that target and any potential dangers to take into account if we are to achieve that goal. However, these cutscenes also provide important narrative context for actions thus having clear compositional motivations. The cutscenes in the *Hitman* games usually frame the targets as inherently bad people who have been involved in all kinds of illegal activities from drug smuggling to corruption, and from biological warfare to child abuse. This compositional functioning also provides certain moral justifications to the violent actions which in turn can influence our moral concerns about engaging in these actions. Here the cutscenes may also draw on our knowledge of the real world or other cultural artefacts. The cutscenes in World War II games often have important realistic motivations in the sense that they refer to our historical knowledge, and the cutscenes in Batman games or Lord of the Rings games have important transtextual motivations since they refer to our knowledge of the larger media franchise. Finally, cutscenes can even have important artistic motivations for being there such as in the use of colour and character representation in the opening cutscene of *Call of Duty: Ghosts*.

Also in-game characters can have a wide range of motivations. In line with the neoformalist approach, such game characters should be considered as a cluster of different characteristics, some of which will have an important role to play in our ludic progress while other characteristics may be more important for narrative development or realistic references. So, while Max Payne's battered and run down facial features play an important compositional role, his ability to enter bullet-time mode (which can also be considered as an important stylistic device) is ludically important because it helps our shooting accuracy. This bullet-time mode also has important artistic motivations since it aestheticizes the path of the bullet and its impact on the enemy's body. Other characteristics making up an in-game character can also have important transtextual and realistic motivations. Batman's Batmobile or the clothes that John Marston in *Red Dead Redemption* wears, clearly reference our knowledge of the Batman franchise or wild western films. Niko Bellic's accent refers to our knowledge of real Eastern European languages and accents, and the facial tattoo of John Sinamoi in *Dead Island* references tattoo practices in Polynesia such as the Maori tā moko.

Other stylistic devices such as mise-en-scène elements, sounds and points-of-view can also have a wide range of functions. As I noted, the third-person perspective has an important ludic function because it gives us a good idea of our character's position in its environment. This means that these perspectives help us in games in which the player has to manoeuvre the character between platforms or move the character out of sight from the enemy. On the other hand, a first-person perspective eliminates the hassle of having an on-screen body that needs to be directed over obstacles, and instead allows us to more exclusively focus on aiming and firing. However, a first-person point of view can also have an important compositional motivation since it limits our vision on the game world, thereby withholding information of for instance a nearby monster which can then help to trigger a startle response once that monster suddenly jumps upon us. In fact, a first-person point of view can also be considered for its realistic function in the sense that it presents us with a perspective on the game world that is similar to our perspective in our everyday lives. In that case, we may be encouraged to identify with the character perceptually which brings us perceptually closer to any violent act.

Mise-en-scène elements and sounds can have important ludic functions when they draw our attention to oncoming danger, or even just to content that is important for our ludic progress such as good weapons or health packs. In fact, these weapons and health packs also have important ludic functions in themselves as elements of mise-en-scène. However, mise-en-scène elements and sounds can also have important compositional functions when they for instance create a certain atmosphere for actions. In these cases, the dimly lit, blood and gravity spattered hallways in the underwater city of Rapture in *Bioshock* put our actions into a very different narrative context than the warm sandy beaches in *Dead Island*. Similarly, the eerie sounds in the dungeon levels in *Super Mario Bros.* create a very different context for actions than the more joyful above ground levels. Finally, mise-en-scène elements and sounds can also have very clear realistic motivations. Mise-en-scène elements can be realistically motivated when they correspond to things we perceive to be real, or when their audiovisual quality corresponds to our norms for audiovisual realism. For example, Liberty city in *GTA IV* can be considered realistically motivated because it referentially references New York City but also because its lighting, colour, texture, and sound are of a certain detailed quality we hold to be realistic. Similarly, the 3-dimensional sound effects in the audio-only game *Papa Sangre* manage to create a relatively realistic sound ecology that we can move in, but also the sounds of the weapons in *America's Army 3* can contribute to the perceptual realism of the game when they are conceived as more or less faithful to real gun sounds.

Lastly, the game's rule-based devices in the form of affordances for actions can have important ludic reasons for being there. A game with an internal point of action gives us different ways to get out of a sticky situation and progress through the game than a game with an external point of action. Similarly, a game with a high level of action affordances will allow us to devise a range of different strategies to achieve the game's goal while a game with only a few action possibilities only give us a few options for ludic progress. However, the higher the level of action affordances, the more likely it becomes that some of these affordances do not serve a ludic purpose at all. In such cases, these action affordances can also serve an important compositional or realistic function, such as the audio diaries in *Bioshock* or the ability to get drunk in *GTA IV*. In fact, these action affordances can even have

transtextual or artistic motivations such as our ability to play with characters from other games in *Super Meat Boy* or our manipulation of the squares in *The Marriage*.

This finally brings me to the dominance of all these various functions. If any device can have a variety of different functions, as I have argued in this chapter, we still need to be able to determine which ones those are and which ones are the most important. After all, without a clear a priori focus on the ludic, the narrative, or even the semantic, the neoformalist approach risks becoming overly broad. As I have argued in this chapter, the ludically important elements are discernible by looking at the way the game frames certain content as undeniable, encouraged by additional rewards, or deniable. The undeniable content that is essential to take note of if we wish to keep playing the game has an obvious ludic dominance. The encouraged content has an important, yet not essential ludic function. And finally, deniable content yields no ludic benefit whatsoever.

It would seem that the neoformalist approach here is being drawn more towards a ludological emphasis on the ludic. As I have noted in the previous chapter by drawing from Aarseth (1997) and Leino (2010), games can enforce certain play responses by presenting us with the possibility of a fail state. This means that the truly ludically undeniable content is actually encoded in the system as long as the player is willing to keep playing, and thereby independent of historical context. On the other hand, the dominance of narrative, realistic, transtextual, or artistic devices cannot be enforced but only encouraged and is more dependent on the player's historical context. This means that any undeniable ludic function will always take precedence over other functions since we are simply forced to acknowledge the importance of this function in order to keep playing. It is only when the ludic function is either deniable or encouraged that other dominant motivations can start to surface.

These other dominant motivations can be compositional when the device is more crucial to the progression of the narrative. In neoformalist terms I have called this bound motifs which exist in dualistic relationship with free motifs which digress from the main plot line. Important compositional motivations can most certainly be found in undeniable ludic content but will always come second to the ludic motivation due to its enforced nature. However, a compositional motivation can

itself also start dominating other types of motivations. In these cases, any ludic function of a device, even when it may gain us a better score, starts playing second fiddle to the fact that the device is more crucial for plot development. In fact, references to the real world or other cultural artefacts will often just function in support of the narrative chain of cause and effect. A reference to a larger super hero universe, or the use of appropriate historical clothing, only help to strengthen the game's narrative. As Thompson herself has argued for Hollywood cinema, the realistic motivations (but I would argue the same can be said for transtextual motivations) then become a 'secondary motivating force (...) to the main compositional justification' and a flaw in the realism or transtextual reference would divert our attention away from the narrative (1988, p. 54).

These realistic and transtextual motivations can also come to the fore once the ludic and compositional motivations are less important. In such cases, the realistic motivation may be specifically there for realistic spectacle such as in many racing games, and the transtextual motivations are there as clever homages to other media such as in *Super Meat Boy*.

Finally, the artistic motivations really only come to the fore when other motivations are lacking. These motivations are particularly hard to find in the larger blockbuster AAA games and also only rarely pop up in individually developed titles. While for instance, the opening cutscene of *Call of Duty: Ghosts* has a clear artistic motivation, that motivation is still overshadowed by its compositional motivation since it provides the essential narrative backdrop for the rest of the story to unfold.

All this means that, in spite of the basic premise that we should not presume any motivation as dominant a priori, certain motivations more easily force themselves to the foreground than others. Nevertheless, this premise remains important to highlight the various combinations of devices and functions at work during our game play experience. First of all, the more dominant motivations are only highlighted after a careful analysis of the various ways the devices function. While such a neutral stance brings with it some methodological challenges (as I will discuss in the next chapter), it remains important to let the game rather than the approach determine the analytical focus. Secondly, in spite of a certain dominant motivation, the other motivations during a particular moment of play can still leave

their mark on our play experiences. The next chapter of this thesis will therefore further explore methodological strategies to get to the more dominant devices and functions and also explore the perceptual, cognitive, and emotional responses that these various functions can cue.

Chapter 5

The Role of the Player

5.1 Introduction

The previous chapter further explored the neoformalist approach to outline the different devices during moments of play and discussed these devices with regards to the functions they have in cueing our responses. Such an analysis is useful because it shows how different videogames and different moments in games structure the content in different ways, all of which encourage different types of behaviours and perceptions. However, the interactive nature of games also brings with it certain challenges for such a system oriented approach. As I argued in chapter 3, games can be considered as multiples that can be instantiated in different ways which raises methodological questions about how to gain intersubjective access to the game's formal components. How do we know if our instance of play is one of the appropriate instances with regards to the functioning of the game multiple?

As I will show in section 5.2, this question ties into the discussion of the dominant on a more holistic game level. As I argued in chapter 3, the dominant refers to the more important content of the game in all five motivational categories. This means that certain decisions we make are more important for ludic progress than others, just as certain decision are more or less important for narrative development, realistic quality, transtextual references, or overall artistic shape. Consequently, the more appropriate instances of play are those instances that include this dominant content. However, this still leaves us with the important methodological issue of how to play to instantiate that dominant content.

Here a careful consideration of the role of the player becomes highly important. Although I have argued that the game is a system that enforces and encourages certain use through rules, rewards, and what Tavinor (2009a) calls subtle psychological nudges, players are still required to actively work with those cues and will do so in a wide variety of ways. As Smith (2006) has noted, those scholars

interested in players and play performances tend to emphasize the active role of the player by oftentimes focussing on the more creative and subversive play performances. In doing so, these scholars also problematize more system oriented approaches that depend on play performances to gain intersubjective access to the functioning of the system (as also evidenced by Juul's (2015) brief history of anti-formalism in game studies discussed in the introduction of this thesis). However, this problem is more grounded in different interests than that it truly lays bare an epistemological issue. While these scholars are right in emphasizing an active role of the player, we can most certainly still try to gain intersubjective access to the game's formal components as long as we can acknowledge that there is an independently existent game system encouraging more and less appropriate play responses. By employing a playing strategy that discloses the more appropriate play responses we can start analysing the way the formal elements function in cueing these responses. In this case, play becomes a methodological challenge, not an interest in itself.

In section 5.3 I will discuss this playing strategy as a strategy in which we let our responses be guided by these formal components and do not actively subvert them. This is the methodological playing strategy I have already briefly mentioned as 'cooperative play' in chapter 3.3. During cooperative play, we do not only do what the game ludically enforces us to do, we also do what the game encourages us to do. Furthermore, this cooperative playing strategy does not only concern the behavioural choices we make but also includes our perceptual cognitive responses to the ludically, compositionally, realistically, transtextually and artistically motivated devices. In other words, the player applies the skills and background knowledge implied by the formal devices.

Here however, we should be careful not to erect a kind of ideal player that is somehow able to activate the one 'correct' instance of the game. Such an ideal player cannot exist because he or she would exist independent of a historical context, and, perhaps more problematic, would require the assumption that a game has one correct way of playing it. Instead, the cooperative playing strategy comes closer to Aarseth's (2007) implied player in the sense that the player still only

instantiates the game in one or more of these various appropriate ways and then deduces the functioning of the formal devices from that instance.

In section 5.4 I delve deeper into how the game's devices cue different types of player roles in the form of agent and spectator. I argue that in our role as agents our cognitive, perceptual and emotional responses are mostly cued by (and thereby concerned with) ludically motivated devices, which means we focus our resources on perceiving, preparing for, and executing actions that are relevant for our success in the game. On the other hand, our role as spectator is encouraged by more dominant compositionally, realistically, transtextually and artistically motivated devices which have us focus our resources on narrative construction and aesthetic evaluation.

In section, 5.5 I show how these different player roles lead to different experiences of the game violence. Here I discuss how a predominant role as agent means that we focus our attention on that violence that is relevant for our play success and cognitively frame the violence as a ludically functional game component. On the other hand, I discuss how a more dominant role as spectator means that we focus our attention on a larger array of violent imagery and perceive the violence for its representational significance and aesthetic quality. Consequently, our emotions towards the violence differ with regards to the focal object.

In the end, this chapter does two things. It first reiterates the methodological challenges that neoformalism faces in the form of player choice. By elaborating on the idea of appropriate play and the way we can gain access to it through a cooperative playing strategy, I hope to strengthen the system-centric claims of the neoformalist approach. Secondly this chapter builds out of the previous chapter to further explore the different ways in which different combinations of devices and functions encourage our perceptual, emotional, cognitive, and behavioural responses. By also specifically emphasizing the player's role as spectator, the neoformalist approach is able to explore a wider range of functions and thereby also explore many different ways in which our experience of violence is cued by the game system.

5.2 Appropriately Playing the Dominant Devices

As I argued in chapter 3, games can be considered as multiples allowing for a wide variety of different instances. In game studies, this idea that players indeed have choices that allow them to instantiate different sets of formal devices is universally adopted although the analytical ramifications of this idea differ amongst scholars. On one end of the scholarly spectrum, there are those with an interest in the formal characteristics of games, like the ludologists and the proceduralists, who are trying to figure out a way around the complicated matter of different instantiations and still make claims about the workings of an intersubjective game object. As I will argue more thoroughly below, these scholars generally argue that player choices are still confined by some core structure which we can come to know through a certain analytical playing strategy. On the other end of the spectrum however, there are those scholars who more fully submit to the inherent selectivity of one's play and argue that a game is therefore better understood in the form of its selective instantiations. In their handbook on videogame studies, Egenfeldt-Nielsen et al. term this group of scholars 'situationists' and argue that these scholars not only argue for a more play-oriented approach to games, but that they also show 'a clear discomfort with the formalist approach' (2013, p. 12).

Following on from Juul's (2015) eight different anti-formalisms in game studies it seems to me that the latter approach is currently the most prevailing one. Ermi and Mäyrä famously argued that the interactive nature of games means that 'if we want to understand what a game is, we need to understand what happens in the act of playing, and we need to understand the player and the experience of gameplay' (2005, pp. 15–16). Sicart specifically argues against the more formalist proceduralism by emphasizing the creative and performative characteristics of play. Focussing specifically on meaning, he states that 'the meaning of a game, its essence, is not determined by the rules, but by the way players engage with those rules, by the way players *play*' (2011). Malaby follows a similar train of thought and adds ontological consequences to. He argues that 'every game is an ongoing process' that has 'the potential for generating new practices and new meanings, possibly refiguring the game itself' (2007, p.102). In other words, a game can change as players notice (intentionally or unintentionally) new ways of playing it,

or as it generates new meanings in a different cultural context (2007, p. 106). Consequently we should focus our analysis on experience and not on formal categories (2007, p. 110).

As I have noted before, it seems to me that oftentimes the difference between these situationists and formalists lies in a difference of interest and not in a disagreement on an epistemological or an ontological level. Bogost for instance, who is the subject of much of Sicart's (2011) criticism, does not claim that meanings are solely determined by the game's rules. In fact, Bogost is very clear about the fact that meanings are generated in the gap between the rule-based representation and the player's subjectivity (see for instance Bogost, 2006, p. 107). However, he is interested in how games express meanings through their various (im)possibilities for play actions (its instantiations), not how players empirically interpret them. Also ludologists do not ascribe such a determining role to the game object. Aarseth even specifically argues that the selective nature of our play instances make the game object cueing our responses a lot richer than what we encounter during a play instance and should therefore be considered as an 'implied game object' (2011, pp. 65–66). Nevertheless, Aarseth is interested in how to study the rules of that game object that structure our play instances, not in how players actually instantiate the game. Also in this thesis I have been careful not to suggest that play responses are solely determined by the game's formal devices but are instead the result of the interaction between game devices and the player's historically determined backgrounds and skills. But also my interest in play responses only provides a set of assumptions about the more appropriate processes that players must go through in order to instantiate a game from which we can deduce the form and functions of the game's devices.

Of course a difference does arise once the play-oriented arguments lead to claims about a presumed unstable game object (e.g. Malaby). Such claims undermine any approach interested in form and functioning of formal game components or, as Leino puts it, would 'discount and undermine a body of knowledge to be gained by studying the material game artefact as it exists' (2010, p. 109). However, I would argue, similar to Leino (2010), that Malaby's ideas about the processual nature of games (2007) do not hold up when it comes to the single player digital games under

investigation in this thesis. Malaby's arguments are mostly derived from non-digital, multi-player game examples where the material structure of the game is indeed more open to social negotiations. However, digital single-player games have a much more definitive material structure confining our play responses. Tavinor (2011) for instance argues that the variability of the instances of play is still significantly bounded by the game's algorithm which can be considered as part of the unchanging artefactual basis of these games. This also links up to Aarseth's (1997) and Leino's (2010) arguments that these games show their materiality in their ability to change their material features in response to player input to distinguish between successful and unsuccessful use.

However, Tavinor also argues that the regulating artefact does not only consist of the game's algorithm but also of the way that that algorithm manifests itself in a set of representational aspects. As he puts it, 'algorithms (...) are neutral in relation to their material instantiation' (2011). This means that even though different games can have the same algorithm (i.e. mods), they are still different games with their own various play instantiations on the basis of their representational differences. These representational aspects consist of 'polygonal 3D models, animations, virtual cameras, physics, environmental sounds and music, dialogue, 2D elements, and graphical artefacts like shaders' (Tavinor, 2011). In other words, these representational aspects make the rules into affordances and give us the narrative and stylistic devices all of which make up the materiality of the game system. These devices can be considered to exist independently of the player and during play the player does not change anything about these devices but just activates various combinations of them.

This also means that the player is not only enforced by the algorithm to instantiate the game in a certain way because not doing so would (eventually) lead to a termination of the game session (the ludically undeniable), but the player is also encouraged or discouraged to perform certain actions through secondary rewards or punishments, or through subtle nudges in the game's stylistic or narrative devices. This brings us back to the different devices discussed in the previous chapter. Here, an opening cutscene can become a motivator for certain types of actions when it presents a certain character as a notable threat. A certain point of

view can encourage more reckless or stealthier behaviour. A certain sound or music change may cue a sense of urgency to keep moving quickly, or a certain mise-en-scène element may slow us down to prepare for danger. Once we acknowledge that not just the game's rules but also its narrative and stylistic devices, are capable of encouraging our decisions in the game, we can see that the game multiple encourages instantiations of itself that are more appropriate than other ones.

Even in a mission like *No Russian* in *Call of Duty: Modern Warfare 2*, where the rule-based devices are neutral about whether the player participates in the killing of civilians in the airport or not, the appropriate choice is encouraged by other devices. For example, the opening cutscene of the game and the missions before *No Russian* already clearly establish the Russians as the enemy and our player character as the hero. Furthermore, in the briefing leading up to the mission, you are told that you are going undercover in a group of terrorists led by a guy called Makarov. A guy, who, as the briefing explains: 'doesn't flinch at torture, human trafficking or genocide'. Finally, the people in the airport are clearly depicted as innocent travellers who are not fighting back but are only trying to save themselves once the terrorists open fire. This means that the game system still encourages not shooting the civilians through compositionally motivated devices that structure our player character as the good guy and the terrorists as the bad guys, and realistically motivated devices that draw on our knowledge of real innocent travellers in an airport. Arguing that *No Russian* is about an undercover agent who goes bad and starts shooting innocent civilians in an airport would simply be incorrect if we take all the game's important cues into account.

This example also shows that the encouraged instantiation does not have to be beneficial to ludic progress. In this case, not shooting is encouraged to achieve narrative consistency. So, because the different devices can have different motivations for being there, an appropriate instantiation of the game should also account for those various motivations. Our play decisions can be encouraged because they are important for ludic success, because they are important for the game's narrative to progress, because they are important for the game to make its references to the real world or other artworks, or because they are important for the game to show its overall artistic shape. In other words, an appropriate instantiation

of the game should contain the more dominant devices and functions of the game because these dominant devices help us say something about how the game works in its different motivational categories. For example, if we want to study the ludic and narrative functions of *GTA IV*, we should appropriately focus on the missions that push our progress, and not on the ability to go to bars or get our cars cleaned. An appropriate instantiation thus points us to the dominant on a holistic level and gives us a focus for analysis.

Performing the play responses to instantiate the game appropriately should of course not be understood as only pushing the right buttons to activate an appropriate screen output. All of our perceptual cognitive responses to the game's devices play a role in the decisions we make to instantiate a particular set of formal game devices. This means that our appropriate play responses consist of a continuous loop of perceiving the various cues that the game foregrounds, fulfilling the cognitive processes of constructing a strategy, constructing a narrative, drawing on knowledge of the real world and/or other artefacts, noticing the game's artistic shape, and then acting on those cognitive findings appropriately to bring about the next set of game devices. In this sense, our play responses are appropriate when we devise a strategy and perform those actions that are beneficial towards achieving the game's goals. Our play responses are appropriate when we perform those actions that are important for the progression of the game's narrative and simultaneously perceive them correctly by organizing them into chronological, causally linked events, and supplementing them with broader contextual information. Our play responses are appropriate when we activate those devices that are important for the game's realistic and transtextual references or its overall artistic shape and at the same time draw on the available background information to successfully fulfil these effects.

All this does not mean that a game encourages just one set of correct play responses. First of all, neoformalism has helped to see that the appropriate actions and perceptions may change over time due to new available information, such as in the case of rocket-jumping or the realistic quality of the first *Mortal Combat*. Secondly, games will always have a variety of mutually exclusive ludically motivated devices, all of which afford appropriate play responses and that force the player to choose.

In a relatively linear first-person shooter like *Battlefield 3* we can switch between weapons, take cover in different spots, or generally move around the environment in different ways. Even a digitized single player game of tic-tact-toe which has a clear perfect strategy (see Juul, 2005, pp. 38–39) still allows for a variety of different game states that are all appropriate within that perfect strategy. A similar thing can be argued for compositionally motivated devices in games with a sandbox structure or branching storylines. In *GTA IV* we can play the missions in a different order, and in *Bioshock* we may decide to save the Little Sisters or not. All of these decisions are appropriate but we have to choose. This still shuffles up the narrative in different ways.

Games sometimes even have appropriate play responses that contradict one another. Drawing back on the *Max Payne 3* example from section 4.3.2, we can see how Max's voice-over, as well as his friend Raoul, often cue us to avoid exploration and keep moving forward. An appropriate response would be to listen to these cues and uphold a fast pace of action. However, the game also includes golden gun parts hidden in the environment which clearly encourages exploratory behaviour. Here the soundscape contradicts these additional rewards, leaving us with two contradicting appropriate play responses. This however, is only the case because there is no reason to assume that one cue is clearly more dominant than the other. If the golden gun parts would have played an essential part in our ability to progress towards the game's goal, the story would of course have been different, since then the golden gun parts would have been ludicrously undeniable.

The point here is that games can and will encourage a variety of different appropriate behaviours, but those appropriate behaviours are still relatively limited as long as we are willing to take all of the game's dominant cues into account and apply the appropriate skillset and background information. So, although we can have many different appropriate play responses in *GTA IV*, stopping for red lights is not one of them, nor is completely ignoring all the missions and living out a peaceful existence in the New World (see below). Similarly, *Battlefield 3*'s narrative is not about a criminal being interrogated, and if you continue to loose tic-tac-toe by not placing your first piece in a corner or in the centre, you are lacking the appropriate skills. In all these cases, games still encourage and enforce a limited

set of appropriate play instances and it then becomes the neoformalist's task to distill the functioning of the game's devices from one or more of those instances.

5.3 The Cooperative Playing Strategy

Once we can acknowledge that there is an independently existent game system encouraging a limited set of appropriate responses, we can go in to find the cues on the basis of those appropriate responses. However, this still leaves us with an important methodological question: what playing strategy should we adopt in order to come to an appropriate instantiation of the game? After all, outside of the specifically enforced behaviour, we can and often will make different choices in the game. So how do we know whether our choices are appropriate?

Here, it seems, there are two possible (though not equally workable) methodological solutions. According to the proceduralists, an appropriate instantiation can be found by an *exhaustive playing strategy*. Proceduralists aim to interpret the game's meaning, which means that an appropriate play response consists of all those actions and perceptions that make up this interpretation. Because the devil may be in the detail when one tries to come to a holistic 'reading' of a game, a proceduralist will aim to make as many different choices (successful and unsuccessful) and test as many different interpretations as possible. As Treanor puts it:

Just like any argument, a meaning derivation will not be considered strong if it ignores evidence that goes against its claim. This is particularly difficult for games, as there are so many types of evidence. Despite this, a proceduralist reading strives to account for as many of the observations about code, dynamics, aesthetics, representation, etc. and how they relate to the culture of the interpreter as possible (2013, p. 134).

While this is indeed a very valid and thorough playing strategy to come to an appropriate play response, there are two problems with it. First of all, it seems that this deductive strategy is only workable for games with a rather limited array of player choices and perceptual cues such as the persuasive games that Bogost (2007) studies. However, once we start to analyse a game like *GTA IV*, it becomes a sheer

impossible task to perform all possible actions and encounter all possible combinations of perceptual cues.

Secondly, as I have argued before, the proceduralists argue that the player's perceptual and behavioural activities cannot escape 'the grasp of subjectivity' (Bogost, 2006, p. 99). This is because the actions taken and the meanings 'read' arise from an interplay between the game and the player's personal background (what Bogost (2006, p. 107) refers to as simulation). Consequently, the proceduralists argue that this playing strategy, however thorough, can only come to a play response that is reasonably appropriate to a rather limited group of people who share similar but never the same backgrounds. The play response thus remains highly subjective and while the analyst can claim that his response is a more generally appropriate one, he has no shared reference points to fall back on. From a neoformalist perspective the subjectivity of background information is problematic because it is only through the application of background information that we are able to instantiate the game and gain access to it. In order for this access to be intersubjective, neoformalism must rely on a set of shared norms during a specific moment in time.

The second playing strategy seems more workable. This strategy is proposed (though not particularly advocated) by Aarseth (2007) who argues that if we want to study the expectations laid down by the game for the player, we need to take on the role of the implied player and follow the game's course. While Aarseth remains somewhat unclear about the finer details of this *implied playing strategy*, we can develop it further by again linking it back to his idea of a game as a self-regulating system (Aarseth, 1997, p. 179). With this in mind, it seems that the implied playing strategy is the strategy that leads to success in the game. However, success is a rather ambiguous term. Are we successful when we reach a high score, when we finish the game, or even when we are applying the appropriate background information to find the game's transtextual references? As I noted in chapter 3, Leino (2010) therefore further elaborates on Aarseth's ideas and argues that on the basis of the game's materiality, success can only be defined as the ability to keep playing because it is only through the ability to terminate the play session, that a game is able to enforce an explicit boundary on the player. In other words, while

different players may define success in different, sometimes personal ways, and perform different action to achieve that success, they can only achieve that success if they perform those actions that the game requires as necessary to continue the play session. In this sense, these required successful actions, which Leino terms the gameplay condition, can be considered as the intersubjective appropriate play response that all players necessarily need to adhere to. The only strategy to come to this appropriate response is then simply to hold the desire to keep playing.

While Leino's gameplay condition provides a useful strategy to lay bare the wide variety of possible play actions that do not lead to an eventual fail state, it is clearly both too broad and too narrow to disclose the appropriate play responses I outlined above. It is too narrow because it only focusses on what is ludically important and not what is important in the other motivational categories. And it is too broad because it only considers something ludically important when it is enforced, and does not acknowledge that game devices can also encourage actions that are not essential to keep playing such as in games with more optional goals. This means that if we were to follow Leino's strategy we end up with an incredibly wide range of appropriate play responses. In *GTA IV* for instance, we may choose to play the different missions and let our character get caught up in a life of crime, or we can choose to let him live out a more peaceful and somewhat mundane existence visiting pool halls and bowling alleys and watching in-game television. In both cases, the player is able to keep playing the game. In fact, if all we want, is to keep playing, we are better off choosing the latter, less dangerous option. But while the game strictly allows for this behaviour, it would be silly to suggest that *GTA IV* is a game about a man living out his peaceful existence in a big city watching TV and playing pool. This is because the game encourages different kinds of play responses through a variety of rule-based, narrative and stylistic devices; play responses where our character does get entangled in a world of crime. This means that even though we are able to respond peacefully, we have to do so by consciously rejecting the many different cues in the game that encourage us in a different direction.

So, to first help narrow down the playing strategy and come to a more limited set of ludically appropriate play behaviours that are also encouraged and not just enforced, I first borrow from Smith (2006). By drawing on economic game theory,

Smith argues that a game's objective goals (those positively valued game states that the player is meant to strive for) can encourage a more limited set of in-game behaviour by shaping preferences and, in consequence, actions. In this case, the game does not necessarily force the player into a certain behaviour but strongly encourages him or her. As Smith puts it:

the game strongly urges the player towards accepting a particular utility function but does not of course ultimately decide how the actual player behaves. We may compare this to the way a house with a kitchen "urges" inhabitants to cook food in the kitchen but does not ultimately restrict them from cooking in the living room (2006, p. 71).

Because the player is still free to ignore the game's objective goals and seek his own subjective ones, this appropriate play can only be found if we adopt what Smith calls a *rational playing strategy*. According to Smith (2006), a rational player is someone who is trying to optimize his or her chances to achieve the objective goals in the game. By adopting the role of a rational player, we are able to rule out a range of inappropriate play actions and focus our attention on those actions that the game encourages for ludic progress. In other words, by trying to optimize our chances to achieve the game's goals, we will automatically instantiate the more dominant ludically motivated devices. Although Smith's economic game theory only allows him to focus on rule-based encouragements - arguing that if the game's rules are neutral about what actions we take to get to the game's goal, all those possible actions are equally encouraged - I would argue that his rational player strategy can also disclose other narrative or stylistic devices with important ludic functions. In that case, also an opening cutscene denoting a character as a particular threat or the sounds of loud footsteps heading our way, encourage us to switch to a heavier weapon because it will increase our chances of achieving the game's goal.

However, if we also want our playing strategy to disclose the devices that play an important role in the other motivational categories, we need to do more than just try to optimize our chances of ludic success. Referring back to Aarseth's (2007) implied player and Iser's implied reader, we need to embody all 'those predispositions necessary for a (...) work to exercise its effects - predispositions laid down, not by an empirical outside reality, but by the text itself' (Iser, 1978, p.

34). In that case we need to adopt a playing strategy that also has the basic predisposition, skillset and appropriate background knowledge to thoroughly but effectively construct a narrative by organizing the game's cues into a chronological narrative chain of cause and effect and filling in the gaps with additional context such as events in-between or prior to what the game shows us. In doing so effectively, we start to disclose those devices that are more crucial to the plot development (bound motifs) and can quickly bypass the less crucial ones (free motifs). Furthermore, this playing strategy needs to include the predisposition and skillset to draw from that appropriate historically available background information to fulfil the game's references to the real world or other cultural artefacts. And finally, that playing strategy needs to include the basic predisposition to appreciate the game and its devices for their overall artistic shape. Having the basic predispositions to fulfil the game's effects in all the motivational categories is what I call the *cooperative playing strategy*.

The cooperative playing strategy requires us to be reasonably well informed of the world around us and the canon of games, films and other artworks in it, so that we can draw on that information when the game requires it. Furthermore, the cooperative playing strategy requires us to have a reasonable skill level to play the game under investigation in which we experience an appropriate amount of challenge but do not die all the time. This way we are able to focus our resources on those cues that the game foregrounds (also see below). Finally, the cooperative playing strategy of course requires us to have a general desire to cooperate with what the game encourages. This means noticing which devices the game foregrounds, perceiving those devices with the appropriate background information in mind, and acting on those cues cooperatively which in turn helps to foreground the next set of devices.

The cooperative playing strategy is a more heuristic approach than the exhaustive playing strategy argued for by the proceduralists. It helps to find an appropriate instantiation of the game through a bottom-up process of testing different actions and perceptual hypotheses, and taking the route of least resistance. In doing so, it is important to remain a neutral stance in which all of the predispositions occur on an equal level. It is only then, that we are able to disclose an appropriate play instance

in which devices with all five of the different dominant motivations can come to play a role. This of course does not guarantee that they also will surface. As I already argued in the previous chapter, ludically undeniable devices will always force themselves to the foreground and subordinate other devices and other motivations. Similarly, realistic and transtextual motivations often function in support of a more dominant compositional motivation. And artistically motivated devices will often only play a minor role. However, as long as we assume all five predispositions with equal intensity, we can let the analysis be guided by the game's devices and not the other way around. Only then can we let ourselves be drawn to the realism of a sun shining through the treetops in *Skyrim*, or be encouraged not to shoot the innocent travellers in *Call of Duty: Modern Warfare 2*. Only then can we start analysing a broader range of devices and functions.

Finally, I should emphasize again that the cooperative playing strategy still only instantiates the game in one of many ways and the game multiple is more than any of its individual realizations. This again links up to Iser's arguments about the implied reader (Iser, 1974, p. 280, 1978, p. 37). However, where Iser keeps emphasizing the selectiveness of the reader's realization of the text in order to focus on the reading process, I would again emphasize that the cooperative playing strategy still comes to an instantiation that is more appropriate than other ones according to the functioning of the game's formal devices. This allows us to focus our analytical focus back onto the form and functions of the game system.

At this point, critics may again argue that this cooperative playing strategy does not reflect the way that real players play games. Real players may consciously work against the game's cues in the form of cheating (Consalvo, 2007), they may not properly understand the game's cues (Schott, Vught, & Marczak, 2013), or simply lack the motor-action skill to perform the appropriate actions (Canossa & Cheong, 2011). In all these cases, the critics make fair points. However, the focus of this thesis is simply not on these empirical play responses but on the form of the game system cueing responses. To gain access to this form, we need to cooperate with the game's cues and play the game appropriately. While this does not tell us anything about how real players may or may not play the game appropriately, it is a useful way of getting access to the game system.

5.4 Appropriate Play as Agent and Spectator

In responding appropriately to the game's cues, I argued in chapter 3 that players should be considered as both spectators of audiovisual output and as agents engaged in planning for and execution of motor-action to bring that output to the screen. Borrowing from Thompson's (1988, pp. 8–9) arguments for film spectatorship, I argued that in our role as spectator we employ our perceptual cognitive resources for comprehension and interpretation of narrative and stylistic elements and in our role as agent we employ resources for action execution to achieve the game's goal. This double player role has seen different arguments in game studies in relationship to immersion (McMahan, 2003), emotion (Frome, 2006, 2007), and formalist characteristics of games (Juul, 2005; Newman, 2002). In fact, some scholars used the distinction to argue for the uniqueness of games in comparison to films, thus emphasizing player agency over spectatorship (Eskelinen, 2001; Linderoth, 2013). In the distinction that I proposed in chapter 3, there is no such inherent dominance of one player role, although I have argued that we can see agency and spectatorship as two polar extremes on a continuum of different forms of player engagements. In that case, players are cued to employ their resources more towards one end of the continuum than towards the other, depending on the structure of the game. As briefly discussed in chapter 3, our role as spectator is predominantly cued by compositionally, realistically, artistically and transtextually motivated devices which means that our activities as spectator are mostly concerned with narrative construction, making references to the real world and other artworks, and experience of the game's artistic shape. On the other hand, our role as agent is predominantly cued by ludically motivated devices which means that our activities as agent are mostly concerned with the activation and identification of action affordances and the various ways in which game devices can play an important role for our progression towards the game's goal. It is now time to explore those player responses a little further by drawing on the devices discussed in the previous chapter.

The obvious reason that games cue the player to adopt the role of agent is because games afford actions. Because games allow us to act on, or in their game worlds by mapping our motor commands onto audiovisual representations of in-game actions,

we get to engage in detailed cognitive planning of subsequent motor actions and then execute those actions by pressing buttons and moving joysticks. Because all games will afford at least some sort of actions, this role as agent can be experienced in any game; from relatively fast-paced action packed first-person shooters like *Quake III: Arena*, to slow-paced point-and-click adventure games like *Myst* (Cyan, 1993) and *Riven* (Cyan, 1997). However, given the fact that these games still afford very different levels- and points of action, we may wonder whether certain action affordances are more prone to cueing our activities as an agent than other. Grodal for instance, explains that his experience of *Myst* is different from ‘shoot-‘em-up games’ like *Quake* because *Myst* does not allow for ‘active control of the type exerted in dynamic interpersonal and inter-agency relations’ (2003, p. 151). In fact, he argues that, because the action affordances are more limited, that ‘the pleasure of such *Myst*-type adventure and mystery games is partly a series of associative and contemplative situations and feelings, in which the associative processing of the perceptual input is just as important as the motor output’ (2003, p. 151). In other words, *Myst* cues us to ascribe more of our resources towards our activities as a spectator than *Quake*, due to its limited action affordances.

On the basis of Grodal’s experience one could be tempted to conclude that more action affordances will automatically cue us to employ our resources towards those action affordances and thus predominantly adopt the role of an agent. However, such a conclusion would be too imprecise. For example, a game like *Skyrim* affords much more actions than a game like *Quake*, yet *Quake* cues us to attribute much more resources towards its limited set of action affordances than *Skyrim*. This is because in *Quake* the action affordances also continuously require our attention for us to progress in the game. Or, to put it differently, almost all *Quake*’s action affordances have an undeniable ludic function which forces us to distribute our perceptual-cognitive resources towards them. On the other hand, a fair amount of *Skyrim*’s action affordances is only optional or just mildly encouraged for progression through the game. In this sense, it is not the quantity of action affordances that may cue us to primarily adopt the role of the agent, but rather the extent to which the affordances are important for us to progress in the game. In other words, it is the dominance of the ludic functionality that cues our agent role.

The consequence of this is that a predominant role as agent does not just entail a greater focus on the activation, identification and execution of action affordances in general, but more specifically on the action affordances that are important for achieving the game's goal. In other words, our role as agent includes a recognition of what is important to achieve the game's goals and a focus on game elements for how they can potentially impact that achievement.

For example, in *Dead Island* the player can pick one of four characters to play. All four characters belong to a certain class with a certain fighting expertise (firearms expert, sharp weapons expert, throwing weapons expert, and blunt weapons expert), all are presented with a short biography that the player can read before making his or her final decision, and all are shown to have physical characteristics that fit their background stories (a Chinese female, an African-American male etc.). At this point in the game, certain character characteristics are thus motivated ludically, certain characteristics are motivated compositionally, and certain characteristics are motivated realistically. While the player is technically free to choose his or her character on the basis of its biography or physical appearance, only the ludically motivated characteristics are suggested to impact our ability to attain the game's goals. In other words, while we are technically free to focus more of our cognitive and perceptual resources towards the construction of the game's narrative or interpreting the meanings of the game's racial stereotypes (the black male is a rapper with a troubled past and the Chinese female is a martial art expert), the game encourages us to assign more of our resources towards the action affordances of the characters since these will help us to achieve the game's goals. This of course does not mean that our activities as a spectator do not occur. It simply means that during this particular moment, the character choice menu has a more dominant ludic motivation which encourages us to be an agent first, and a spectator second.

Our role as agent is usually not only cued by ludic motivations. In fact, in most cases, other motivations will play a supportive role in our plan to achieve the game's goals. Our understanding of what the game's goals are is usually framed through compositionally motivated devices. If we are trying to outrun the police after an assassination, our understanding of a getaway car as a drivable object is triggered by references to what real cars look like. And if we see that our health bar has

diminished in size, we understand that we need to start looking for health packs from our knowledge of game conventions. In fact, one could even argue that artistic motivations also function in support of our ludic progress (as well as other types of responses) since, as Thompson (1988, p. 19) argues, other motivations cannot exist independent of an artistic motivation because all of the devices inherently contribute to the game's overall shape. In that case, any design choice is also an aesthetic choice. The aesthetic choice of red and white colours in *Mirror's Edge* also shows us where to go to achieve the game's goals. All this shows that our role as agent is often complemented with our role as spectator. However, in these cases we draw on knowledge of the real world or game conventions, or we construct a narrative and perceive artistic choices to increase our chances of success in the game.

A final remark to make about our role as agent is that it does not necessarily involve motor-actions, at least not immediately. Instead, as I noted in chapter 3, we only need to have the promise of motor control over the situation from which we can start forming our detailed plans for the execution of the appropriate actions towards game success. The construction of such strategies or tactics form a large part of our role as spectator. This of course connects up to the idea that all kinds of game devices including those devices that do not afford any motor actions, can still have important ludic functions. The music in *Serious Sam 3: BFE* indicates nearby enemies, and the brief cutscenes that show when we enter a new area in *Prince of Persia: The Sands of Time* (Ubisoft Montreal, 2003), point out the different enemies on the scene and the direction that we are supposed to go in. In these cases, the devices themselves cannot be acted upon, but they still encourage a predominant role as agent by letting us anticipate upcoming ludically significant actions first and perceive for narrative, artistic, realistic or transtextual significance second.

Once a device becomes less important for our progression through the game, other functions may come to the foreground and cue us to assign more of our resources towards the construction of a narrative, call upon our notions of the real world and other games and films, or appreciate an artistic quality of the device. In these cases, dominant compositionally, realistically, artistically and transtextually motivated devices cue a more intrinsically motivated perception. In other words, our

perception of narrative, realistic and transtextual references, or artistic shape does not serve another ludic purpose but becomes purposeful in itself. We then adopt a more dominant role of spectator.

This role as spectator often occurs during the more 'passive' game moments in which we have no immediate action opportunities nor the suggestion of action opportunities in the near future. In many cutscenes we are often neither forced nor encouraged to devise a strategy for future actions. Instead we are encouraged to construct the narrative of the game, or appreciate the artistic shape of the cutscene as it finally rewards our ludic efforts. In the many cutscenes in *Battlefield 3* for instance, we are presented with footage of an interrogation scene between one of our player-characters and his military superiors. During the interrogation we get the necessary narrative information that frames the next mission which encourages us to understand our mission actions in the context of the narrative. However, other than that the cutscenes have no ludic purpose. They do not show us how a certain character is particularly dangerous which could have cued a careful playing strategy once we encountered that character during gameplay. They do not show the geographic outline of the game space which could have encouraged us to plan an attacking strategy moving from cover to cover. They do not even really tell us much about the skills of our character or the skills of our enemies at all which could have helped to devise a plan of attack. Instead, these cutscenes mostly encourage us to perceive for the sake of perception alone. We draw on our knowledge of story formats to organize causality and time of the game whose missions and cutscenes are presented out of chronological order. We draw on our notions of security camera-like imagery from the real world or other cultural artefacts to make sense of the grainy black and white imagery. And we may even appreciate the artistic shape of the animation with its use of lens flares and the use of hard, low-key lighting. Similar to our viewing responses to films, our role as spectator in games make our perceptions non-practical, leaving us to more freely perceive for the purpose comprehension and interpretation.

However, other than our viewing responses to films, our spectator role in games can also occur during moments in which we can act. But while the game affords actions, those actions do not serve an important ludic purpose which still allows us

to engage in more spectator activities. In fact, during these moments we can even employ our ability to act for the purpose of perceiving. While free roaming through the forests of *Skryim* for instance, we may look up at the tree canopy and appreciate its realistic appearance. Although we are performing actions during these moments, the actions do not serve an immediate ludic purpose. Instead we may use our actions for our perception of the tree-canopy by steering our character to the more beautiful parts of the forest and directing the in-game camera upwards to get the better view. Here, the game encourages us to compare its tree canopy to the norm for realistically looking tree canopies we have gained from experience with real tree canopies and tree canopies in other artworks. This means that during these moments a realistic and perhaps artistic motivation takes priority over any immediately necessary ludic function and we are encouraged to indulge in the realistic and artistic spectacle that is the animated representation of tree canopy.

This example also shows how our actions as spectator are often slower and more contemplative than our actions as agent. In this sense, pace can play an important role in cueing us to distribute more of our perceptual cognitive resources towards our activities as agent or our activities as spectator. As argued in the previous chapter, a fast pace forces us to be more economical with our resources while a slower pace encourages us to distribute our attention more freely. Because game pace often consists of movement impetus where certain devices enforce a time limit on the player's actions or otherwise encourage or discourage fast decision making, a fast pace is often combined with action affordances that have important ludic functions. In this sense, a fast pace generally encourages our activities as an agent, while a slower pace allows us the time to engage in narrative comprehension or meaning construction.⁴⁹

⁴⁹ There may be some exceptions to this rule. In games like *Fahrenheit* or *The Walking Dead* for instance, the conversation system forces the player to choose a conversation topic or a question or answer within a limited time. In these cases, the game forces a fast pace on the player's choices, but

If we take Thompson's (1988, pp. 8–9) claim to mean that not just our mental processes but in extension also our perceptual attention is focused down in our role as agent, then the eye tracking study by Seif El-Nasr and Yan (2006) discussed in the previous chapter, confirms this point. After all, these authors note a larger range of eye movement in the third-person action-adventure game *Blood Omen 2* (Crystal Dynamics, 2002) than in the first-person shooter *Halo II* (Bungie, 2004) and they attribute these results to the slower pace and the relative safety of the player-character in *Blood Omen 2*. Here, the safety and in extension the slower pace of *Blood Omen 2* allow us to scan the environment and take in information that is not immediately relevant for our chance of survival, while the fast pace and continuous danger in *Halo II* require a more economical use of perceptual resources. In other words, to reiterate a part of Thompson's quote from chapter 2: 'If we noticed every perceptual item within our ken, we would have no time to make decisions concerning our most pressing needs, like not stepping out in front of a bus' (1988, p. 8).

At this point, I should again note what I argued in chapter 3, that also our skill level can influence to what end we mostly assign our cognitive and perceptual resources. If we have not sufficiently incorporated the controls of a game, we will have to spend a significant amount of resources towards performing the actions appropriately. On the other hand, an expert player will be able to perform more actions 'automatically' without directing much conscious attention towards them. In this sense, the player's skills level can overrule any cues embedded in the game to encourage a certain player role and thereby invalidate any claims based on those

the choices are not strategic choices of an agent but rather narrative choices of a spectator. Here the player perceives the different options and quickly forms hypotheses about how the narrative will turn out with every option. Our cognitive perceptual resources are therefore not assigned to strategic planning and executing the appropriate action, but rather to forming the most desired narrative. While action execution is still a part of this and will require at least some resources, the conversation system as a whole encourages more perception for story construction.

cues. In order to still make claims on the basis of the game's structure, we should thus try to keep this subject variable as constant as possible. For this very reason, the neoformalist approach that I propose here argues for a cooperative playing strategy where a player has the skills level that is implied by the game (see previous section). By offering different difficulty levels, the game encourages us to pick the level that fits our skills level so that we find the appropriate amount of challenge in the game.

5.5 The Player as Agent and Spectator of Violence

If we consider that the agent role has us focus our cognitive perceptual resources on the preparation for and performances of ludically important actions, and our role as spectator focuses our cognitive perceptual resources on comprehension and interpretation of narrative, realism, transtextual references, and artistic quality, then it will come as no surprise that also game violence can be perceived very differently depending on what role the game encourages more. Here I consider two arguments.

5.5.1 The Argument Concerning our Perceptual Cognitive Focus

The first argument concerns our perceptual and cognitive focus. If Thompson is right in claiming that our mental processes as agents are focussed down whereby we ignore a myriad of sights and sounds in order to effectively proceed towards our goal (1988, p. 8), then one could argue that during moments of violence in which we are cued to be more agent than spectator, our perceptual experience of that violence is focused on those things that are important for our ludic progress. This could mean two things. First of all, it could mean that our perceptual attention is focussed on those devices that are beneficial to ludic progress and that other devices are kept peripheral. Secondly, it could mean that of the many different functions that a device can have, we focus on the ludic functions and start ignoring the other ones. This is of course an iterative process whereby important ludically motivated devices first cue our role as agent, which in turn focusses our attention further on the ludic functions. When we ourselves perform a violent action, our resources are thus mostly focused on the successful execution of a set of motor-actions and on the activation of new action opportunities, all of which constitute the planning and execution of a larger play strategy. Similarly, when we see someone else in the

game perform a violent act, that action is mostly of interest to us to the extent that it activates certain action affordances that help us in achieving the game's goals.

In drawing on Gibson's theory of ecological perception, Linderoth (2013) makes a similar point and argues that for an agent, perceptions are intrinsically connected to actions in the sense that we perceive action affordances that we act on, which in turn activate new action affordances that we can perceive and then act on, and so forth. While I am reluctant to ascribe the role of agent to an ecological theory of perception since we still identify action affordances with the help of (transtextual and realistic) background information,⁵⁰ Linderoth does effectively show how a predominant role as agent has us perceive actions as both the execution of available action affordances and the activation of new ones that may benefit our ludic progress, rather than for the things that the actions represent narratively, realistically or even artistically or transtextually. This means that violent imagery is perceived both as the appropriate feedback to our ludically important motor actions and as the means to achieving the game's goals. In our role as agent, we see the gunfire less as gunfire and more as the feedback to pressing our mouse button and for the new action affordances that the gunfire activates (e.g. killing a prison guard activates the opportunity to escape). Here we perceive the gory and gruesome trauma in a game like *Mortal Kombat* less as realistic representation of blood and broken bones and more as the feedback that confirms our visuo-motor engagement with the game

⁵⁰ An ecological theory of perception denies the occurrence of any cognitive processes necessary for us to recognize the thing as something that we know to afford certain actions. For example, how can we see that a gun affords shooting if we have no previous knowledge of guns? In their extensive argument against direct perception, Fodor and Pylyshyn (1981) call this the difference between *seeing something*, which indeed depends on what the thing you see is (as the ecologists would argue), and *seeing something as*, which depends on what you know about the thing. To take their example, we cannot see that the Pole Star affords navigation, unless we see the Pole Star as the Pole Star rather than a dot of light in the sky. And to see the Pole Star as the Pole Star you need some sort of mental representations of and about the Pole Star.

system which activates new opportunities towards achieving game success. Gregersen (2014) even argues that some of the more extravagant/vivid representations of violence in games is a result of the medium's inability to simulate bodily feedback to our executed actions. In this sense, the audiovisual feedback is turned up to compensate for the lack of bodily feedback to still give the player a sense of agency. While this does not mean that we do not also see the violence for its realistically looking details, or even for the purpose it has in the story, it just means that, when we are cued to adopt a more dominant agent role, our resources are more attuned to picking up the audiovisual feedback as the confirmation of our action execution and the activation of new action opportunities.

There are of course limits to the validity of these claims. Once the violence gets too disturbing, our moral objections will likely start to play a more prominent role and problematize such abstractions of the representation into ludically significant visuo-motor action loops. If the overarching goal of the game was to rape as many people as possible, it is not very likely that we perceive the actions mostly for their ludic functionality. This is also why this thesis focusses on physical 'blood and guts' violence which is what many games rely on for substance. As I noted before, the mechanisms of conflict in games are easily represented as physical violence. For this reason, the link between ludic progress and physical violence is a well-established staple of most videogames which likely makes our perceptions of this violence as ludic mechanisms easier. However, we should keep in mind that this cannot be said about all other types of violence.

So, while the argument may not hold for a game like *Rapelay*, it does explain Juul's observation that *Quake III Arena* players turn down the game's graphical settings in favour of faster input-output processes (see chapter 3). This makes sense since these games predominantly encourage our role as agents by encouraging us to quickly execute a wide range of action affordances that have undeniable ludic functions. In turning down the game's graphical settings, players adhere to these cues and focus their resources towards the successful execution of the motor actions. For them, the graphics of the violence are only important to the extent that they provide sufficient feedback to player input and can show the action affordances necessary to keep engaging with the system towards success. While the graphics of

the game could also cue a sense of perceptual realism, that function is now even purposefully ‘switched off’ to focus on the game’s more dominant ludic functions.

In other games or game moments our resources may be more focused on a narrative, realistic, transtextual or artistic comprehension of the violence. In the discussed bullet-cam mode in *Max Payne 3*, the player is encouraged to take on the role of spectator and witness the artistic qualities of the visual spectacle. In a game like *Soldier of Fortune* (Raven Software, 2000), where we are able to keep shooting at the bodies of dead enemies, removing every single limb, there is no ludic purpose to our action anymore since the enemy is already dead. Instead we are given the time to reflect on the realism and artistic detail of the dismemberment. While the player may still be cued to focus some of his perceptual cognitive resources towards aiming and firing the gun, the action is framed by more dominant realistic and artistic motivations encouraging a more prominent role as spectator. Similarly, when we decide to gun down a random pedestrian on the streets in *GTA IV*, our actions are not encouraged by an undeniable ludic function nor are we forced or encouraged to adopt a certain fast pace since the player is not in any real danger. This means that during these moments, the game cues us to allocate our cognitive perceptual resources towards perceiving the violence for its realistic or artistic quality or for its role in the narrative. On the other hand, if we are engaged in a shoot-out in an abandoned warehouse in the mission *Russian Revolution*, our violent actions have an undeniable ludic function since the enemies need to be shot to progress through the game and we are also forced into a relatively fast pace since taking it slowly will likely get our character killed. In this case, we are more encouraged to distribute our resources towards the appropriate execution of the actions that the game affords, and factor out the narrative, realistic and artistic functions of these actions. Although the mission as a whole has an important compositional purpose, presenting a twist in the narrative of the game, the violent actions themselves encourage very little narrative construction and encourage us to perceive the action more as the appropriate actions towards the game’s ludic goal.

5.5.2 *The Argument Concerning our Emotional Responses*

The second argument to consider here concerns our emotional responses to the in-game violence and follows from the first. If, during a predominant role as agent,

our mental processes are focussed on goal-directed visuo-motor action loops factoring out other stimuli such as those contributing to a broader narrative construction or the realistic, transtextual or artistic evaluation of the violence, our emotional responses to the in-game violence may also be related less to the narrative meanings and realistic, transtextual or artistic quality of the violent events and more to their ludic purpose and our execution of the proper visuo-motor action loops.

This argument aligns with theories by Perron (2005) and Frome (2006), who distinguishes between three different types of emotions that differ with regards to the focal object of the emotion. Drawing from Tan's (1996) theory of emotions in films⁵¹, both scholars first divide between the emotions towards the represented world (*R-emotions*) and the emotions towards the artefact (*A-emotions*). The *A-emotions* are emotions of aesthetic evaluation and consist of emotions like the enjoyment of hearing good voice-acting, the desire to encounter human-like AI behaviour, the admiration of a certain graphical style, the astonishment of a certain special effect, or the displeasure of flimsy controls. In our *A-emotions* we recognize the operation of an intelligent creator in the game and we appreciate or do not appreciate that creator's work for its aesthetic ingenuity and its transtextual familiarity (see also Tan, 1996, pp. 64–65). This means that our *A-emotions* are mostly triggered by dominant artistically and transtextually motivated devices since those are the devices that refer to the game as an aesthetic artefact.

The *R-emotions*, on the other hand, are emotions in response to the characters and events in the fictional world of the game. These emotions consist of the emotions we feel with or for *Max Payne* when he loses his wife and child, or the fear we feel when his life is threatened by a couple of bandits. We principally experience these

⁵¹ Tan adheres to a functional theory of emotions (see Frijda, 1986) where emotions include cognitive processes that mediate between the emotional stimulus and the emotional response as well as action tendencies. In other words, emotions include a cognitive appraisal dimension and an action dimension.

emotions along with or for a character in the game (Tan (1996) calls this ‘empathic emotions’) because during the encounter of bandits it is not our life that is in danger but the character’s. However, there are instances where we may experience emotions directly in response to the events without imagining the situation of the character. As Tan explains with regards to films, during a torture scene we can still experience disgust or revulsion for the visual details directly while at the same time feeling pity for the tortured and loathing for the torturer (1996, p. 83). Similarly, we can directly feel awe for a beautiful landscape or amazement at the realism of a shooting scene. In all cases though, our emotions are triggered for the game’s fictional events and not for the game as an aesthetic artefact. This means that R-emotions are mostly cued by dominant compositionally and realistically motivated devices since these devices make up the realistic quality of the fictional world and the narrative events in that world.⁵²

These two emotion-types are also predominantly cued during moments where we are encouraged to adopt the role as spectator in games. In our role as spectator, we are encouraged to focus our perceptual cognitive resources towards comprehension and interpretation of the game’s fictional events and evaluation of the game’s aesthetic qualities. Consequently, as a spectator we are likely to experience emotions in response to the realism and narrative structure of the represented world, and the transtextual and artistic quality of the game artefact. However, as both Frome (2006) and Perron (2005) rightfully argue, these two emotion-types do not cover the full spectrum of emotions in response to games. Therefore, they introduce a third type of emotion which they term game emotions (*G-emotions*).⁵³ These G-

⁵² While transtextual motivations can also play an important role in cueing R-emotions, they often do so in support of more dominant compositional or realistic motivations. See for instance, the example of the character Alma discussed below who indeed has clear transtextual references to the film *Ring* (Ichise, et al. & Nakata, 1998).

⁵³ Perron actually talks of gameplay emotions rather than game emotions in order to emphasize the personal experience of the gamer since these emotions arise from our motor-actions in the game.

emotions are emotions related to the ludic goals of the game. As Frome puts it, ‘game emotions are emotions of competition, the emotions generated due to winning, losing, accomplishment, and frustration (2006, p. 19).⁵⁴ These are the emotions related to the preparation and performance of certain tasks towards accomplishing the game’s goal. In a similar distinction Tan and Jansz in fact refer to these type of emotions as ‘task-related’ and describe them as ‘emotions relating to progress vs. blockage in arriving at valued goal states and obtaining preferred outcomes’ (2008, p. 546).

These G-emotions fit well with our role as agent as I have described it here. During a predominant role as agent, we feel fear of losing and hope of winning. We feel frustration about our own inability when we are unable to deal with a difficult situation or anger at the game for its unreasonable difficulty level. Similarly, we feel joy when we have accomplished a difficult task, and sadness when we have failed. In all these cases, our emotions are directed towards the game’s ludic goals and our efforts towards achieving them rather than towards the character’s goals and the character’s efforts of achieving them. While our desire to achieve the game’s goal is often irreversibly linked to our desire to have our player-character survive a zombie attack, there is still a difference between wanting to succeed in the game *Dead Island* and wanting our character to escape a zombie infested island. Although success in the game is represented as our character fleeing the island, our

However, as I argued, our motor-actions in the game are still very much structured by the game which means I hold to the game rather than gameplay as the focal object of the emotions.

⁵⁴ Frome argues that these game emotions can also be social emotions such as regret when we have failed to protect a fellow player or schadenfreude. However, since I focus on single-player violent videogames here, I leave the social components aside.

emotional concern during a predominant role as agent is less for the safety of the character and more for our own play success.⁵⁵

Let's take an example. The first-person action horror game *F.E.A.R.* has an abundance of action scenes in which the player has to dispense of a range of different enemies in a typical first-person shooter style. These moments have a considerably fast pace and the actions have undeniable ludic purposes. Because of this, I would argue that these moments encourage us to assign more of our perceptual cognitive resources to the action affordances in the game environment and to the appropriate execution of actions that help our progression in the game. During these moments, we do not predominantly relate the threat of the enemies to our character's goals of survival since that would require us to assign a considerable part of our resources to constructing the narrative goals of the character and imagining them as our own. Such activity is simply not supported by dominant compositionally motivated devices. Instead, our mental processes are more economically focused on what is immediately relevant for our desire to progress through the game and achieve the game's goals. In this case, our emotions are thus mostly based on ludic goals which are higher in priority due to the dominance of ludically motivated devices.

During these moments of violence in *F.E.A.R.* the dominant emotions are thus likely to be G-emotions on the basis of the game's structure. This means that the fear we experience for the enemies is predominantly a fear that they may block our progression through the game and the excitement we experience when we end up killing these enemies is an excitement for removing the blockage and progressing successfully. These G-emotions occur no matter what the representational significance of the audiovisual feedback is (assuming that we are sticking to the

⁵⁵ Here I assume, in line with the functional theory of emotion, that goals occur in hierarchies (Ellsworth & Scherer, 2003). This means that the primary appraisal is not based on all our possible goals at once but on those goals that are high in priority at a particular moment in time.

physical violence we generally encounter in games). We can feel this fear and excitement even if the enemies are represented as squares firing little triangles towards us, and killing them is simply represented as an explosion of those squares. While we may also experience A-emotions or R-emotions in response to these violent sequences, these emotions are subordinate to the G-emotions due to the undeniable ludic function of the action affordances and the game's fast pace.

Very often however, *F.E.A.R.* also has us traversing dark and eerie rooms and hallways in abandoned industrial buildings without encountering any enemies to combat. During these moments, the background story, the sound effects, the music, the low-key lighting, and the appearance of scary shadows on the wall all have dominant compositional, realistic and even artistic and transtextual motivations. They encourage us to assign more of our perceptual cognitive resources towards evaluating the aesthetic quality of the game artefact and constructing the story of a Special Forces unit encountering scary paranormal activities. For example, the use of sound in *F.E.A.R.* seems to be motivated transtextually and compositionally in the sense that it shows similarities to the use of sound in Japanese horror cinema and creates the creepy setting for the horror narrative to unfold. This means that during these moments the sound encourages us to assign our resources towards narrative construction and aesthetic evaluation and our emotions consequently consist of R-emotions for the creepiness of the narrative setting, and A-emotions when we appreciate the sound as a clever designer's reference to Japanese horror cinema.

Similarly, we soon learn that if we encounter the ghostly figure Alma during these slow-paced atmospheric moments in the game, she does not really pose a threat to our progression since she appears to be just a hallucination and cannot be acted on. Instead, it seems that Alma only poses a threat in the fiction of the game. During these many hallucinations, Alma, who resembles a younger version of the demonic girl from the horror film *Ring*, is seen roaming around hallways covered in blood and killing whole teams of soldiers with her supernatural powers. This suggests that, even though she does not form a blockage to our progression in the game, she does pose a threat to the characters in the fiction since she is seen fictionally killing other soldiers. In line with Carroll we could then argue that our emotional response

to Alma is one of ‘art-horror’ where we both fear her for the threat she poses to the wellbeing of the characters in the fiction and directly feel revulsion at the sight of her since she crosses the boundaries of our conception of children being innocent and sweet (1990, pp. 27–35). In this sense, the fear that we feel for Alma is a fear in relationship to the narrative goals of the fictional characters and Alma’s impure looks and behaviour as a creepy child. During these moments our emotions are R-emotions cued by dominant compositional and realistic motivations and not G-emotions that would require Alma to be perceived as a threat to our own ludic goals. In other words, these moments cue us to adopt a more dominant role as spectator and have us evaluate the visual stimulus in relationship to the goals of the in-game characters and our conceptual categories of what a natural young girl is like.

In Gaut’s (1999) terms, our R-emotions thus partly come from a motivational identification with our player-character in the sense that we imagine wanting what the character wants fictionally rather than just wanting what we want ludically. At this point, Alma does not just pose a threat to the character’s goal of survival but vicariously to our own imagined goal of survival. Consequently, Alma cues in us a physiological response that we label as fear for our survival. This emotion can be considered a form of empathic identification (Gaut, 1999) in which we imagine ourselves to be in the situation of the character (we want what he wants) and we come to actually feel what we imagine the character to be fictionally feeling.⁵⁶ In

⁵⁶ One could argue, as Carroll (1990, p. 91) does, that we cannot feel the exact same emotion as the character because for the character the emotion is rooted in the belief that the ghostly figure poses a real threat to his survival while for us this threat is not real. To put it in Walton’s terms, one could say that from the character’s perspective, fictional truths are actual truths and our fictional fear is his actual fear. However, this, I believe, misconstrues the notion of empathy. As Neill (1996) convincingly argues, empathy is namely always an imaginative matter in the sense that we can come to feel what we imagine a character to feel not what we know someone to feel. And since our empathy is inextricably linked to our imagination of what a character feels rather than what we know a character feels or what the character actually feels, the character’s feelings are equally rooted in

this case, however, what we imagine the character to be fictionally feeling is not cued by any portrayal of emotion by the character since game characters do not generally show their feelings outside of the game's cutscenes (see section 4.3.3). Instead, the emotions that we imagine the character to be feeling are induced from what we imagine that the character fictionally wants. In other words, our affective identification is inextricably linked to our motivational identification. This could mean that, even if the character appears emotionally neutral, affective identification and empathic identification are still possible as long as we are able to adopt some of the character's basic needs during our activities as spectator.

I should note here that our R-emotion of fear in a predominant role as spectator during games is still not likely to be the same as our R-emotion of fear as spectator of films. This is because, as Grodal (2000) adequately notes, our emotions in games are generally labelled according to our own coping abilities rather than our judgement of the coping abilities of the character. Here, Grodal focuses on what Lazarus (1991) calls the secondary appraisal component of our emotions. According to the emotion theory that Grodal adheres to, emotions do not just include a primary cognitive appraisal of the significance of the event to our concern (ludic, fictional, or aesthetic), but also a secondary cognitive appraisal of our ability to deal with the emotion eliciting event. To take Grodal's (2000) example, if we meet a lion in the savannah, our emotions are not just labelled according to the evaluation that the lion threatens our survival (primary appraisal), but also according to how we are able to deal with that threat (secondary appraisal). If we are unarmed and do not think we can run from the lion we may feel despair. If we are big game hunting, we may feel excitement. And if we are unarmed but think we have a chance of escape we may feel fear and make a run for it. During moments of interactive gameplay, our emotions are then labelled according to how we

what is true in the fiction. To put it differently, we can only empathize with what we can imagine a character to feel, and what we can imagine a character to feel is only true in the fiction of the game.

ourselves are able to deal with the emotion eliciting event because we are the ones controlling our character's actions, while during non-interactive cutscenes or during film spectatorship our emotions are labelled according to our judgement of the coping abilities of the character.

That our G-emotions during a predominant role as agent are labelled according to our own coping abilities seems self-evident since we also judge the event to how they affect our own ludic goals. In these cases, an enemy forms a threat to our own goals of winning and our emotion is further labelled according to how we as players are able to deal with that threat. However, if we are cued to adopt a predominant role as spectator during moments of interactive gameplay, our R-emotional responses are somewhat more paradoxical. During such a moment, we are cued to evaluate the threat in relationship to our character's concern of survival but our emotion is further determined by our own abilities to deal with that threat. I would argue however, that during these moments this paradox in our emotional experience is resolved by our motivational and behavioural identification with the character. At that point we imagine the threat to the character's survival to be a threat to our own survival because we imagine wanting what the character wants, and we are also encouraged to imagine the character's actions as our own actions by the fact that we actually control the character's actions through our internalized P-actions (see section 4.4.1). In this case then, our R-emotions are rooted in two forms of identification with our player-character which would mean that during a predominant role as spectator we are more inclined to experience emotions to the violence as if we ourselves are performing it fictionally.

I should emphasize here however, that R-emotions in response to performing violence fictionally are not the same as emotions in response to performing violence actually. Here I follow Walton (1990) and argue that these emotions based on make-believe rather than actual believe are 'quasi emotions'. Although these emotions are still genuine in the sense that they contain similar - though less intense - physiological sensations to 'real world emotions', our labelling of an emotion as fear for our survival is only true in the fiction of the game which makes it fictional

that we experience that fear (Walton, 1990, pp. 241–249).⁵⁷ This means that when we think we experience fear or anger towards an enemy in the game, that fear or anger is only fictional since it is only fictional that the enemy concerns our goals of survival or saving the world. Although it is not fictional that we experience affective responses that show similarities with real fear or anger when someone really concerns our survival or goal of saving the world, these affective responses are significantly less intense and should be seen as only quasi-fear and quasi-anger. This explains why we often still desire to experience these emotions again and why we do not run away from the screen when we fictionally fear our survival is in danger. Although the enemy may also concern our actual goals of winning the game, such concerns are ludic concerns that trigger G-emotions in relationship to blockage and progression in the game.

This finally also points out an interesting difference between R-emotions and the other two emotion types that we can have in response to game violence. While R-emotions are based on something imagined, G-emotions and A-emotions are based on something real. When we feel G-emotions in response to game violence we feel emotions in relationship to winning and losing a real game system with its positively and negatively valued game objectives. Similarly, when we experience A-emotions in response to game violence, we experience emotions for the artistic quality or transtextual references of a real designed game artefact. However, when

⁵⁷ Walton's theory of fiction has been criticized by Carroll (1990) who argues that Walton's argument for a fictional fear does not match the phenomenology of the actual fears we can experience in response to fictions. While it goes beyond the purpose of this thesis to delve deeper into this debate, it is worth noting that also Carroll would likely support the main point that I'm making here: that our emotions in response to the represented world are different from our emotions to the real world. After all, even according to Carroll's 'thought theory' (that also Tan (1996) subscribes to) where we would feel fear at the thought of a ghost, our emotions do not have the same form as emotions to something real where our emotions are grounded in a believe (Carroll, 1990, pp. 79–86).

we feel R-emotions in response to game violence we do not feel emotions in response to the game as an aesthetic artefact or the game as a system of narrative, stylistic and rule-based devices that we can really win or lose. Instead, we feel emotions in response to fictional events involving fictional characters that we do not believe to be real. Although this could lead one to argue that R-emotions are less intense emotions than G-emotions or even A-emotions, I would be reluctant to draw that conclusion since the objects of the different emotions do not just differ in their realism but also in their intrinsic values and relevance. In other words, it could also be argued that if something concerns our survival or the fate of the world, even if that is only fictional, the value and relevance is greater than if something concerns our goal of winning a game or our desire to find transtextual references or artistic ingenuity.

In conclusion of this section I should emphasize that these three types of emotions are not mutually exclusive but will often occur simultaneously. We could for instance simultaneously experience a dangerous enemy with fear for how that character can negatively impact our game progress, fear for how that character could negatively impact our survival fictionally, and aesthetic appreciation for how the audiovisual characteristics of the character have involved great craftsmanship. What I am saying here, however, is that the dominance of certain motivations will likely cue one type of emotion more than the other just like they steer our perceptual cognitive resources. In that case, more dominant narrative and realistic motivations cue us to get more emotionally invested in the fiction of the game in a predominant role as spectator. More dominant artistic and transtextual motivated devices will cue us to focus on the game as an aesthetic artefact and evaluate it in relation to other artworks and for its overall abstract shape. And more dominant ludically motivated devices encourage us to become emotionally invested in achieving the game's ludic goal.

5.6 Conclusion

After the previous chapter focussed on game devices surrounding moments of game violence, this chapter took a look at the important role that the player plays in actualizing the immediate effects of these devices. This focus is important because it is through these responses that we can try to gain access to the game's form which

requires us to address methodological challenges since games are interactive media that can be instantiated in different ways. Furthermore, with neoformalism's focus on the way devices function to cue our play responses, a further exploration of those responses is needed to expand our understanding of that functioning. All in all, this chapter draws back on some of the more complex issues surrounding active player participation discussed in chapter 3, and elaborates on these issues to explore and finally strengthen the usefulness of neoformalism as an approach to games.

First of all, I argued that if we acknowledge the independent existence of a set of rule-based, stylistic and narrative game devices cueing our responses, then we can try to gain access to these devices by playing appropriately according to the functioning of these devices. This is not a normative claim but a methodological necessity. After all, using cheat codes, lacking the required skills, and being unaware of any referential significance does not tell us much about the game but more about the players and their (mis)understandings of the game. If we mean to study the rules, we need to abide by them and not subvert them. And if we mean to study the narrative and stylistic devices, we need to apply the background information that these devices cue and not draw on irrelevant information. It is only through such appropriate play that we can gain access to the functioning of the game's devices.

These appropriate play responses are still not singular nor are they fixed in time. Instead, there is often a wide variety of different decisions that we can make all of which are equally beneficial to attaining the game's goals; in games with branching storylines all storylines are equally encouraged; game devices sometimes encourage us to perform contradictory actions; and since backgrounds are historically determined the appropriate responses often shift over time. But in spite of this variety, the appropriate play responses are not infinite. As long as we take note of narrative, stylistic and rule-based devices that are important in cuing our ludic progress, narrative construction, realistic and transtextual references, and appreciation of artistic shape, then our play responses are narrowed down to a workable set on the basis of which we can start to claim intersubjective access to form and function of the game's devices. This is because these different functions

also play a role in the behavioural decisions that are encouraged which means that the appropriate decision in *No Russian* becomes not to shoot the innocent tourists.

Our play responses are thus appropriate when we instantiate a set of game devices that are important for our holistic game experience in all of the motivational categories and we then respond to them by taking note of their more dominant functions and apply the implied background information and skills available during that moment in time. However, this still leaves us with a question of how to play in order to come to these appropriate play responses. Here I have argued for a cooperative playing strategy in which we take on the predispositions to fulfil the game's effects in all of its motivational categories by being reasonably well informed of the world around us and other cultural artefacts, having the skills to play the game with an appropriate amount of challenge, and having the basic desire to cooperate with the game's cues. This cooperative playing strategy takes a neutral stance towards the game's cues so that we can heuristically come to appropriate play responses whereby the game and not the approach guides the analysis. While the cooperative playing strategy still instantiates the game in one of various ways, we nevertheless perform according to the game's devices which allows us say something about (one of the ways) the game functions.

The second part of this chapter further elaborated on the roles of the player as both agent and spectator in connection to the various functions that game devices have. I first argued that our role of agent is mostly cued by dominant ludically motivated devices which means that it is mostly concerned with successfully performing those actions that are beneficial to achieving the game's goals, not performing actions per se. This agent role also includes the construction of strategies and tactics to come to the game's goals which means that the role can also be cued by non-interactive game devices as long as they have a dominant ludic motivation (e.g. cutscenes). This of course does not mean that other motivations play no role in encouraging our role as agent. In fact, goals are usually communicated through narrative context, our understanding of in-game affordances is usually aided by references to objects in the real world or other cultural artefacts, and even aesthetic colour choices can help our ludic progress. In all these cases however, these motivations are subordinated by a more dominant ludic motivation.

However, the contribution of the neoformalist approach lies more evidently in the discussion of our role as spectator. By also acknowledging that our play responses include more spectator-like activities, our understanding of the game play experience becomes much broader which helps to account for a broader range of devices and functions. Our role as spectator is generally triggered by devices with dominant compositional, realistic, transtextual and artistic motivations. This means that our spectator role is often cued during non-interactive cutscenes, but it can most certainly also occur during interactive game moments. During such cases, the pace of the game is often slow because there is no immediate need for important ludic actions. Instead, actions are performed in support of story construction, realistic or transtextual references, or even to appreciate the game as an aesthetic artefact.

Because our roles as spectator and agent concern different perceptual, cognitive and emotional focus points, our experience of in-game violence also significantly changes according to the role that is more encouraged. As predominantly agent we are cued to focus our perceptual attention on those parts of the screen that are immediately relevant for our progression towards the game's goal. This means that any violent imagery that does not serve a ludic purpose is likely to be glanced over or ignored. Furthermore, our mental processes are also focused on the ludic purpose of the violence rather than the narrative meanings or artistic values, and consequently, our emotions towards that violence are cued to be emotions towards the way the violence affects our game progress. For further effect research this could lead to some different hypotheses. One could either hypothesise that perceiving the violence as a ludically purposeful component removes any linkage with real world violence thereby inhibiting potential copycat behaviour or desensitization to real world violence. On the other hand, one could also hypothesise that the ludic purpose of the violence does in fact remove some barriers for potential copycat behaviour and does potentially desensitize us to real world violence by showing us that violence is just part of a game of winning and losing.

As predominantly spectator of violence, we are more cued to disperse our attention across the screen and take in a larger array of perceptual cues that do not necessarily benefit the player in his quest for the game's goal. Likewise, our mental processes are cued to construct the narrative context of the violence or the realistic references.

We may even be encouraged to evaluate the artistic quality of the violence or any transtextual references. Consequently, our emotions during a predominant role as spectator are derived from aesthetic evaluations of the violence as part of a crafted game artefact, or the way that the violence impacts the concerns of the characters in the game's fiction. Also this can lead to some further after-effect hypotheses. One could for instance hypothesise that perceiving game violence for its aesthetic quality inhibits social learning after-effects since the violence is clearly perceived as part of a crafted game artefact and does not translate to real world violence. Similarly, one could argue that if we perceive the violence as part of the game's fiction there is no need for moral concern since we know the violence is merely fictional. On the other hand, one could also argue that we are still encouraged to identify with the character (behaviourally and motivationally) and perform a violent act that represents (more or less realistically) a real kind of violent act. While we then know that the act itself is fictional the fact that it represents a real kind of thing could be ground for social learning or desensitization. Similarly, seeing the artistic beauty in game violence could hold after-effects for the way we perceive real world violence. While it is not the purpose of this thesis to deal with these kinds of questions, taking into account the different types of perceptual, cognitive, and emotional responses to game violence can certainly help to focus any further studies into media effects.

Chapter 6

Conclusions and Perspectives

6.1 Summary

Over the previous chapters, this thesis has positioned itself within two main scholarly debates. First of all, it addressed the debate around game violence which, to this date, is mostly dominated by those with social concerns over the potential correlations between game violence and aggression. However, this thesis had no interest in studying the after-effects of game violence but instead asked about the formal components of game violence and the way they function in relationship to one another to cue our experiences. In doing so, this thesis took a more game-oriented angle in this debate and further explored the often glanced over questions concerning the forms of game violence and their functions during moments of play.

In order to focus on the formal components of game violence, this thesis suggested and explored a formalistic approach and in doing so also positioned itself in a second debate: a methodological debate about studying games as objects. As argued in the previous chapters, there are two prevailing ‘formalisms’ in game studies that could have helped to focus our attention on the formal components of game violence (ludology and proceduralism). However, since game violence is made up of important audiovisual cues as well as rule-based processes, ludology was found to be unsuitable for a study of game violence because it gives a clear preference to a game’s rule-based devices at the expense of the game’s narrative or stylistic ones. Similarly, proceduralism’s focus on games as tools for meaning expression risks glancing over any ludic functions of violence-related devices, thereby also ignoring the contribution that these functions can have in prompting an experience of that violence. For these reasons, I found that there was room and need for a new formalism in game studies, positioned in between ludology and proceduralism, that allowed for a more balanced and inclusive consideration of game violence elements. After drawing from the neoformalist approach in film studies and adapting and expanding this approach to suit the study of games, I eventually coined the so called neoformalist approach to games.

Over the course of this thesis, this neoformalism has proven useful for a number of reasons. First of all, the approach helped to create a more balanced consideration of rule-based devices, narrative devices but also stylistic devices. By focussing on games from a player's perspective as a set of interrelating components rather than an underlying system regulating output, no single set of devices are presumed more important from the onset. Instead, the approach presumes rules (in the form of affordances), narrative and stylistic devices as equally important in potentially triggering our play responses, which has allowed me to ask questions about the narrative justification of the violence or the characters involved in the violent act, the use of 'mise-en-scène' elements, sound, pace, or point of view during moments of game violence, the point of action afforded by the rules and the way violence is either rewarded or punished. Which devices end up being the more important ones depends on the game itself, not on some normative a priori framework. As long as we assume the different predispositions for the game to achieve its effects in all five of its motivational categories (see below), certain devices and motivations will automatically surface as the more dominant devices which then form the focus points of our analyses.

Secondly, the neoformalist approach to games has proven useful in answering this thesis' question because it first and foremost is a functionalist approach. This means that the interest is not so much in the formal devices themselves, but rather in the way that these different devices function in cuing our violent game actions, our perceptions of that violence, our cognitive evaluation of that violence, and even our emotional responses to that violence. Here, the approach helps to identify these functions by considering the reasons for the presence of a device, or what the neoformalists have called 'motivations'. In chapter 3 I argued for five different types of motivations. First of all, we can consider a game device's ludic motivation, which means that the device is there to facilitate the competitive, rule-bound, and goal-directed process of play. Secondly, we can consider a device's compositional motivation, which means that the device is there to help the construction of the game's narrative. Thirdly and fourthly, we can consider a device's realistic and transtextual motivations, which means the device is there to appeal to our notions of the real world (realistic) or our knowledge of other works (transtextual). And finally, we can also consider a device's artistic motivation when it is there to

contribute to the overall abstract shape of the game. As I have argued, any device (narrative, rule-based, or stylistic) can have a plethora of different motivations and, as I will reiterate shortly hereafter, we will be triggered to have very different experiences of the game violence depending on what devices and motivations are most dominant during any one moment of play.

A third way in which the neoformalist approach to games has proven useful in this thesis is the fact that it has helped us answer epistemological and methodological questions about how we can know and study an object (the game or the game violence) when any knowledge of that object is always acquired by an individual subject (the player) with its own will, skills, and background. In game studies these questions have found additional relevance due to the interactive nature of games which means that games can be considered as multiples that can be instantiated in multiple different ways. I have shown that, as long as we assume the independent existence of a set of formal (rule-based, stylistic, and narrative) game devices cueing our responses, then neoformalism offers some clear assumptions about the methodological roles of the player allowing us to focus on those devices in spite of these challenges.

As a poetics, the approach first assumes the play instance as the basic premise for undertaking the analysis. Since the interest is in the way that devices function to prompt our play responses, these play responses are taken as a starting point after which we can go in and find the devices responsible for cueing them. While this gives an important role to the player and his/her experience, this does not make this new game formalism a 'player approach' interested in individual perceptions and behaviours during play. Instead, I argued that we can still focus on the work as long as we are willing to let ourselves be guided by the dominant cues in the work. This means that we adopt a cooperative playing strategy, applying both the background information and the skills implied in the game in order to come to more appropriate actions and perceptions according to the game's cues. It is thus from an implied play performance that we can focus back on the game and see which formal elements are functioning to trigger this experience. Here, the player becomes a construct suggested by the game's cues rather than an individual entity prone to diverge from the suggested path.

It is of course in this assumption of a cooperative player that the neoformalist game approach will undoubtedly encounter its main criticism. However, as I will reiterate more elaborately below, this cooperative play is justified because it allows for focus. A focus on form simply cannot account for a wide range of different 'playings'. This is not to argue that these 'playings' do not exist, nor to preserve some objectivity about the effects that a game prompts. It is simply a way of focussing on the form of the game by assuming there is more and less appropriate play on the basis of the functioning of the game's devices.

A final way that the approach has proven to be particularly useful, is the fact that the approach also helps to emphasize the player's viewing activity alongside the more commonly emphasized configurative activity. This means that play activity is conceptualized as existing on a continuum between pure agency and pure spectatorship, thereby linking up with other 'dual process approaches' (Newman 2002; Ryan 2006) in game studies. In this case however, the interest is not so much in these play activities per se, but rather in the way that the formal devices work in cuing these activities. As I argued in chapter 5, devices with an important ludic function encourage our role as agent while devices with more important other functions encourage us to engage with the game in a role that is more similar to the spectator of films. This means that game violence that is made up of, or surrounded by, predominantly ludically motivated devices cues us to distribute our perceptual attention and cognitive resources towards the way these devices afford further progression through the game. The effect is that our perceptual cognitive resources are focused down on those elements that are of immediate concern to our successful actions. Consequently, also our emotional responses will be connected to the ludic goals of the game. These emotions are what Frome (2005) and Perron (2006) have called G-emotions. Any fear, anger, joy, or sadness we experience during these moments of game violence will most likely be for the way that the violence-related devices impact upon our own progression through the game.

On the other hand, violence that is made up of, or surrounded by dominant compositionally or realistically motivated devices, triggers us to disperse our perceptual attention more freely across the screen and construct the narrative and the realistic quality of the game world. In this case, the violence is comprehended

for the role it plays in the fiction of the game, for instance for the way it helps to establish a character as brutal and ruthless, or the way it denotes a resolution in a conflict between good and evil. Following Tan (1996), Frome (2005), and Perron (2006), the emotions in response to these moments of violence are so called R-emotions. In these cases, the violence is experienced for how it affects a character in the game rather than for how it affects our own game success

Finally, dominant artistically and transtextually motivated devices encourage us to appreciate the violence for its aesthetic quality or transtextual ingenuity. In these cases, similar to the predominantly compositionally or realistically motivated violence, we do not focus our perceptual and cognitive attention down on the affordances and actions influencing our game success. Instead, we employ our resources more freely for aesthetic appreciation of for instance the graphics, the original score, or even the derivative plot twist. In these cases, we experience what Tan (1996), Perron (2006) and Frome (2005) call A-emotions, where we recognize the violent encounter to be part of a human created game artefact and experience for instance enjoyment, admiration, displeasure, or surprise for the craftsmanship that went into creating the violent scene.

6.2 Answering the question

Throughout this thesis I have often outlined the different motivations and player engagements separately from one another for the sake of clarity. However, it should be emphasized that any moment of in-game violence can consist of a multitude of formal devices which all can have different motivations for being there. This brings me back to the main question of this thesis. At the beginning of this thesis I asked how violence in single-player videogames works. While this is a broad question, I believe I have been able to narrow it down by exploring a neoformalist approach to games that specifically focuses on the way that formal elements function in cueing certain responses. By applying this approach to a wide variety of R-rated (16+ and 18+) games, I was able to show that violence in single-player games works according to the different functions of a range of narrative, stylistic and rule-based devices that make up and contextualize the violence. These functions can frame the violence as important ludic component for a successful playing of the game; as contributing to the realism and narrative of the game; as referencing other works

(e.g., games or films); and even as contributing to the overall artistic form of the game. Depending on what functions are more important during a particular moment of in-game violence, we will be triggered to have very different perceptual, cognitive and emotional responses to the game violence. Studying how violence in games works therefore requires a close look at all the devices and all their functions during a particular moment of play.

6.3 Limitations

With a focus on the game's formal components, this thesis is of course limited in its scope. The neoformalist approach to games does not allow for a thorough analysis of different play styles, nor for an analysis of different socio-cultural player backgrounds. The approach does also not allow for a thorough analysis of design intentions, nor for measuring usability. I should emphasize again that these limitations are not because I believe that the formal components are somehow more important than these other focus points, or that different play experiences do not exist. As I noted in the introduction, formalisms (in one form or another) have received a lot of criticism in game studies for being too much focused on rules to the exclusion of story; being too much focused on form to the exclusion of players; or being too much focused on essential properties of what games are rather than on the many different experiences that games can facilitate. By focussing on rules, narrative and stylistic components equally and by having analytical rather than essentialist aims, the approach argued for in this thesis goes some way towards addressing these concerns. However, some of these criticisms will remain since the approach is still focussed on form rather than context or idiosyncratic play experiences. Such a focus is of course a limitation but it also serves important purposes. Just like any approach, also the neoformalist approach directs our attention to a manageable set of issues because we simply cannot study everything at once from all different angles. We cannot be, what the Germans so aptly call an 'Eierlegende Wollmilchsau' (egg-laying-wool-milk-pig) that makes everyone happy. And even if we could, making everyone happy may not be most beneficial to our understanding of the objects of study or the further development of the academic field. Different perspectives provide different, sometimes opposing answers about an object of study and it is through academic discourse that answers

are tested and refined. Furthermore, as Bogost notes aptly in a recent blogpost: ‘part of the reason for a field of discourse to exist is to reproduce itself via controversy and dispute,’ and making everyone happy by focussing on everything at once ‘would give us all nothing to do’ (Bogost, 2015).

A focus on one thing does of course require certain assumptions about other things. In this particular case, there are two broad assumptions that allow for this focus. First of all, the neoformalist approach assumes that all devices have a reason for being there because it is only by assuming this that we can study the way that game devices function on the basis of the different motivational categories. However, such an assumption does in principle not leave room for design flaws. This may be considered particularly problematic in games since the scale and interactive nature of these objects mean that not all design flaws are usually identified and fixed before release. Aside from the fact that this makes neoformalism a rather ineffective approach when testing for bugs, it could also be problematic when the analysis of the game is based on some of these design flaws. While this appears to be a clear limitation of the approach, I would, in this case, vouch for the common sense of the analyst. When all of a sudden game characters start summersaulting in mid-air while the rest of the game adheres to recognizable gravity physics, we are probably dealing with a flaw and should not include it as an important device in our analysis. In other words, if certain game devices are completely out of tune with the rest of the game’s devices, we ignore them in our analysis.

Furthermore, a focus on the formal characteristics of game violence requires an assumption of a cooperative player who applies the skills and has the backgrounds implied by the game’s cues and consequently performs the appropriate actions and perceptions. The assumption of a cooperative player is susceptible to critique from scholars with a more player oriented approach. These scholars may emphasize that players are not always cooperative, that they cheat, lack skills, and come from different socio-cultural backgrounds. I would say that all this is true. However, as I have argued extensively in chapter 5, while focussing on all these things may tell us a lot about how players (mis)perceive, (mis)understand and (mis)play the game violence, it does not tell us anything about the game violence itself. Once we acknowledge that the material of the game exists outside of the play experience and

it is able to structure that experience, then a cooperative playing strategy is the most appropriate analytical strategy of getting to that material and the way it cues us to respond. Or, put differently: then the neoformalist approach to games is the most effective.

6.4 Future research

Since the scholarly debate around videogame violence has been dominated by psychological effect research, the study into the formal aspects of violent games is still relatively underdeveloped. In much of the effect research, the games are often taken to be either violent or non-violent since the interest is in fact in its after-effects rather than in the game violence itself. On the other hand, those studies that do focus on exploring the variations of game violence often do so in order to quantitatively outline different violent content categories rather than to explore the way that the various components function in triggering our responses. While this thesis has attempted to fill some of this gap in the research, many questions about the formal components surrounding game violence and the connection between formal components and play experiences remain unanswered or are only tentatively explored. Are certain combinations of devices for instance more likely to cue certain perceptions of game violence? Or even more specifically, can we generalize about the differences between violence portrayed from a first-person or third-person perspective and violence in a 2D or 3D environment? Could we then categorize types of game violence, and by extension games, on the basis of certain dominant user functions?

I have of course argued that every moment of game violence requires independent scrutiny because even a first-person perspective can have differing dominant functions and different related devices with different functions. However, the above questions are nevertheless worth exploring since an answer would allow us to create a taxonomy of violent games and thereby contribute to a better-informed public perception of game violence. In fact, if we were able to generalize about certain combinations of devices and functions, answering these kinds of questions could advice the public policy around game violence, for example by using content descriptors based on dominant motivations.

Of course, in such a case, we would also need to address more empirical questions about how players actually deal with the formal cues presented to them. For instance, how do players negotiate between different equally important functions of a device? Are certain players more likely to focus on ludic motivations, compositional motivations or even realistic, transtextual, or artistic motivations in spite of the dominant motivations that the game puts forward? Or, put differently, to what extent are players actually of the cooperative kind argued for in this thesis?

If we are able to answer these questions we would be able to strengthen and refine the relationships between game forms and play experiences. We can then start to make more evidence based claims about how players with different skillsets and different socio-cultural backgrounds actually perform and perceive the violence on the basis of the game's cues. This means we can also start to build bridges between game studies and player studies. While those studying players and those studying games differ in their methodologies, objects of study, and purpose of study, there are still clear connections to be made as long as we can acknowledge that games exist as material objects (not just as something that players do) that can affect our play. Once we acknowledge this, then player studies can become a testing ground for game studies and any deviant behaviours or perceptions that do not fit with the dominant cues in the game can then come to further refine the claims about game form and function and/or be explained by referring to different player models (see Smith 2006).

All this will ultimately also help to further refine psychological studies into the after-effects of game violence. Instead of focussing on violent versus non-violent game content, scholars can then zoom in on more specific combinations of devices and functions to see when arousal levels spike, when players deliver more intense white noise blasts, or when more aggressive thoughts and feelings are listed. While it will still remain difficult to draw generalizable conclusions about aggressive after-effects due to difficulties with measuring aggression and ruling out other influencing factors, at least the game violence variable can now be conceptualized more precisely.

Finally, the neoformalist approach to games argued for in this thesis could also be used to study other elements in games. It could be used to study the functions of

devices related to other matters of social concern such as sexism in games or the unequal representations of race or sexual orientations. However, it could also be used more broadly to look at the functions of game sound for the overall game experience, the role of game pace in prompting a sense of suspense, or the ludic effectiveness of a certain point of view. We can also start to revisit certain (ludological) claims about the importance of ludic functions in specific games, such as Aarseth's account of playing a *Tomb Raider* game (Aarseth, 2004), and see whether we can make sense of this on a micro level when taking all the different devices and their functions into account.

All in all, this thesis has left plenty of stones unturned. Nevertheless, I hope that the careful outlining of devices and functions making up game violence and the exploration of a neoformalist approach in game studies has raised further interesting questions and will thereby inspire further research. I for one, am eager to start turning some of those stones.

References

- Aarseth, E. (1997). *Cybertext: Perspectives on Ergodic Literature*. Johns Hopkins University Press.
- Aarseth, E. (2001). Computer Game Studies, Year One. *Game Studies*, 1(1).
- Aarseth, E. (2003). Playing Research: Methodological approaches to game analysis. Presented at the Digital Arts and Culture, Melbourne, Australia.
- Aarseth, E. (2004a). Genre Trouble: Narrativism and the Art of Simulation. In N. Wardrip-Fruin & P. Harrigan (Eds.), *First Person. New Media as Story, Performance, and Game* (pp. 45–55). Cambridge, MA: The MIT Press.
- Aarseth, E. (2004b). Quest Games as Post-Narrative Discourse. In M.-L. Ryan (Ed.), *Narrative Across Media. The Language of Storytelling* (pp. 361–376). London: University of Nebraska Press.
- Aarseth, E. (2007). I Fought the Law: Transgressive Play and The Implied Player. In *Proceedings - DiGRA 2007: Situated Play* (pp. 130–133). The University of Tokyo.
- Aarseth, E. (2011). “Define Real, Moron!” Some Remarks on Game Ontologies. In S. Günzel, M. Liebe, & D. Mersch (Eds.), *DIGAREC Keynote-Lectures 2009/10* (pp. 50–69). Potsdam University Pres.
- Aarseth, E., Solveig Marie, S., & Lise, S. (2003). A multidimensional typology of games. In M. Copier & J. Raessens (Eds.), *Level Up Digital Games Research Conference* (pp. 48–53). Utrecht: Utrecht University.
- Adachi, P. J. C., & Willoughby, T. (2011). The effect of Violent Video Games on Aggression: Is it More Than Just the Violence? *Aggression and Violent Behavior*, 16, 55–62.

- Anderson, C. A., & Dill, K. E. (2000). Video Games and Aggressive Thoughts, Feelings, and Behavior in the Laboratory and in Life. *Journal of Personality and Social Psychology*, 78(4), 772–790.
- Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy*. Oxford: Oxford University Press.
- Apter, M. J. (1991). A Structural Phenomenology of Play. In J. H. Kerr & M. J. Apter (Eds.), *Adult Play: A reversal theory approach*. Amsterdam: Swets and Zeitlinger.
- Bensley, L., & Van Eenwyk, J. (2001). Video Games and Real-Life Aggression: Review of the literature. *Journal of Adolescent Health*, 29, 244–257.
- Biocca, F. A. (1988). Opposing Conceptions of the Audience: The active and passive hemispheres of mass communication theory. In J. A. Anderson (Ed.), *Communication Yearbook 11* (pp. 51–80).
- Björk, S., & Juul, J. (2012). Zero-Player Games. Or: What We Talk about When We Talk about Players. Presented at the Philosophy of Computer Games Conference, Madrid. Retrieved from <http://www.jesperjuul.net/text/zeroplayergames/>
- Bogost, I. (2006). *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA: The MIT Press. Retrieved from <http://mitpress.mit.edu/catalog/item/default.asp?tttype=2&tid=10917>
- Bogost, I. (2007). *Persuasive Games: The Expressive Power of Videogames*. Cambridge, MA: MIT Press.

- Bogost, I. (2008). The Phenomenology of Videogames. In S. Günzel, M. Liebe, & D. Mersch (Eds.), *Conference Proceedings of the Philosophy of Computer Games* (pp. 22–43). Potsdam: Potsdam University Press.
- Bordwell, D. (1985). *Narration in the Fiction Film*. Madison, Wisconsin: University of Wisconsin Press.
- Bordwell, D. (1989a). A Case for Cognitivism. *Cinema and Cognitive Psychology*, 9, 11–40.
- Bordwell, D. (1989b). Historical Poetics of Cinema. In R. Barton Palmer (Ed.), *The Cinematic Text: Methods and Approaches* (pp. 369–398). New York: AMS Press.
- Bordwell, D. (1989c). *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema*. Cambridge, MA: Harvard University Press.
- Bordwell, D. (1996). Contemporary Film Studies and the Vicissitudes of Grand Theory. In D. Bordwell & N. Carroll (Eds.), *Post Theory: Reconstructing film studies*. Madison, Wisconsin: University of Wisconsin Press.
- Bordwell, D., & Thompson, K. (2004). *Film Art. An Introduction* (7th ed.). New York: McGraw-Hill.
- Bradford, C. (2009). Playing at Bullying: The postmodern ethic of Bully (Canis Canem Edit). *Digital Culture & Education*, 1(1), 67–82.
- Branigan, E. (1984). *Point of View in the Cinema. A theory of narration and subjectivity in classical film*. Berlin: Mouton Publishers.
- Brewer, W. F. (1996). The Nature of Narrative Suspense and the Problem of Rereading. In P. Vorderer, H. J. Wulff, & M. Friedrichsen (Eds.), *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 107–127). London: Routledge.

- Brockmyer, J. H., Fox, C. M., Curtiss, K. A., McBroom, E., Burkhart, K. M., & Pidruzny, J. N. (2009). The development of the Game Engagement Questionnaire: A measure of engagement in video game-playing. *Journal of Experimental Social Psychology, 45*, 624–634.
- Bruder, M. E. (1998). Aestheticizing Violence, or How to Do Things with Style. *PostModern Perspectives*.
- Bruner, J. (1986). *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Bushman, B. J. (2004). Effects of violent video games on aggressive behavior, helping behavior, aggressive thoughts, angry feelings, and physiological arousal. *Entertainment Computing - ICEC 2004, 3166*, 22–22.
- Calleja, G. (2011). *In-Game: From Immersion to Incorporation*. Cambridge, MA: The MIT Press.
- Canossa, A., & Cheong, Y.-G. (2011). Between Intention and Improvisation: Limits of Gameplay Metrics Analysis and Phenomenological Debugging. In *Think Design Play*. Amsterdam, the Netherlands.
- Carroll, N. (1990). *The Philosophy of Horror or Paradoxes of the Heart*. New York: Routledge.
- Carroll, N. (1999). Film, Emotion, and Genre. In C. Plantinga & G. M. Smith (Eds.), *Passionate Views. Film, Cognition, and Emotion* (pp. 21–47). London: The John Hopkins University Press.
- Collins, K. (2008). *Game Sound: An introduction to the history, theory, and practice of video game music and sound design*. Cambridge, MA: The MIT Press.

- Consalvo, M. (2007). *Cheating: Gaining Advantage in Videogames*. MIT Press.
Retrieved from
<http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=11153>
- Consalvo, M. (2009). There is No Magic Circle. *Games and Culture*, 4(4), 408–417.
- Copier, M. (2003). The Other Game Researcher. Participating in and Watching the Construction of Boundaries in Game Studies. In M. Copier & J. Raessens (Eds.), *Level Up. Digital Games Research Conference* (pp. 404–419). Utrecht: Utrecht University.
- Csikszentmihaly, M. (1990). *Flow: The Psychology of Optimal Experience*. Harper Perennial.
- Culler, J. (1997). *Literary Theory: A very short introduction*. New York: Oxford University Press.
- Dahlskog, S., Kamstrup, A., & Aarseth, E. (2009). Mapping the game landscape: Locating genres using functional classification.
- Davies, M. (2009). Examining Game Pace: How Single-Player Levels Tick.
Retrieved from
http://www.gamasutra.com/view/feature/4024/examining_game_pace_how_.php
- Dietz, T. L. (1998). An examination of violence and gender role portrayals in video games: Implications for gender socialization and aggressive behavior. *Sex Roles: A Journal of Research*, 38(5-6), 425–442.
- Dill, K. E., & Dill, J. C. (1998). Video Game Violence: A review of the empirical literature. *Aggression and Violent Behavior*, 3(4), 407–428.

- Egenfeldt-Nielsen, S., Smith, J. H., & Tosca, S. P. (2013). *Understanding Video Games. The Essential Introduction* (2nd ed.). New York: Routledge.
- Eitzen, D. (2014). Effects of Entertaining Violence. A critical overview of the general aggression model. In T. Nannicelli & P. Taberham (Eds.), *Cognitive Media Theory* (pp. 158–176). New York: Routledge.
- Ellsworth, P. C., & Scherer, K. R. (2003). Appraisal Processes in Emotion. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of Affective Sciences* (pp. 572–595). New York: Oxford University Press.
- Ermi, L., & Mäyrä, F. (2005). Fundamental Components of the Gameplay Experience: Analysing immersion. In S. de Castell & J. Jenson (Eds.), *Proceedings of DiGRA 2005 Conference: Changing Views* (pp. 15–27).
- Eskelinen, M. (2001). The Gaming Situation. *Game Studies*, 1(1). Retrieved from <http://www.gamestudies.org/0101/eskelinen/>
- Eskelinen, M. (2004). Towards Computer Game Studies. In N. Wardrip-Fruin & P. Harrigan (Eds.), *First Person. New Media as Story, Performance, and Game*. Cambridge, MA: The MIT Press.
- Farrar, K. M., Krcmar, M., & Nowak, K. L. (2006). Contextual Features of Violent Video Games, Mental Models, and Aggression. *Journal of Communication*, 56, 387–405.
- Feagin, S. L. (1999). Time and Timing. In C. Plantinga & G. M. Smith (Eds.), *Passionate Views. Film, Cognition, and Emotion* (pp. 168–179). London: The John Hopkins University Press.
- Fodor, J. A., & Pylyshyn, Z. W. (1981). How Direct is Visual Perception? Some reflections on Gibson's "ecological approach." *Cognition*, 9, 1.

- Frasca, G. (2003). Simulation Versus Narrative. Introduction to Ludology. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 221–235). London: Routledge.
- Frijda, N. H. (1986). *The Emotions*. Cambridge, MA: Cambridge University Press.
- Frome, J. (2006). Representation, Reality, and Emotions Across Media. *Film Studies*, (8), 12–25.
- Frome, J. (2007). Eight Ways Videogames Generate Emotion. In *Situated Play: DiGRA 2007* (pp. 832–835).
- Frome, J. (2009). The Ontology of Interactivity. Presented at the Philosophy of Computer Games Conference, Oslo, Norway. Retrieved from <http://www.jonathanfrome.net/papers/Frome%20-%202009%20-%20The%20Ontology%20of%20Interactivity.pdf>
- Frome, J., & Smuts, A. (2004). Helpless Spectators: Generating suspense in videogames and film. *Text/Technology*, 1, 13–34.
- Galloway, A. R. (2006). *Gaming. Essays on algorithmic culture* (Vol. 18). London: University of Minnesota Press.
- Gaut, B. (1995). Making Sense of Films: Neoformalism and its Limits. *Forum for Modern Language Studies*, 31(1), 8–23.
- Gaut, B. (1999). Identification and Emotion in Narrative Film. In C. Plantinga & G. M. Smith (Eds.), *Passionate Views. Film, Cognition, and Emotion* (pp. 200–216). London: The John Hopkins University Press.
- Gee, J. P. (2003). What video games have to teach us about learning and literacy. *Computers in Entertainment*, 1(1), 20.
- Genette, G. (1980). *Narrative Discourse*. Ithaca: Cornell University Press.

- Goldstein, J. H. (Ed.). (1998). *Why we watch: the attractions of violent entertainment*. New York: Oxford University Press.
- Goldstein, J. H. (2001). Does Playing Violent Video Games Cause Aggressive Behavior? Presented at the Playing by the Rules: The Cultural Policy Challenges of Video Games. Retrieved from <http://culturalpolicy.uchicago.edu/papers/2001-video-games/goldstein.html>
- Gonzalez, L. (2004). When Two Tribes Go to War: A History of Video Game Controversy. Retrieved from <http://www.gamespot.com/articles/when-two-tribes-go-to-war-a-history-of-video-game-controversy/1100-6090892/>
- Gregersen, A. (2014). Cognitive Theory and Video Games. In T. Nannicelli & P. Taberham (Eds.), *Cognitive Media Theory* (pp. 253–267). New York: Routledge.
- Gregersen, A., & Grodal, T. (2009). Embodiment and Interface. In B. Perron & M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 65–83). New York: Routledge.
- Grimshaw, M. (2008). Sound and Immersion in the First-Person Shooter. *International Journal of Intelligent Games & Simulation*, 5(1).
- Grimshaw, M., & Schott, G. (2007). Situating Gaming as a Sonic Experience: The acoustic ecology of First-Person Shooters. In *Proceedings - DiGRA 2007: Situated Play* (pp. 474 – 481).
- Grodal, T. (2000). Video Games and the Pleasures of Control. In D. Zillmann & P. Vorderer (Eds.), *Media Entertainment: The Psychology of its Appeal*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Grodal, T. (2002). The experience of realism in audiovisual representation. In A. Jerslev (Ed.), *Realism and "reality" in film and media* (pp. 67–91). Copenhagen: Museum Tusulanum Press.
- Grodal, T. (2003). Stories for Eye, Ear, and Muscles. Video Games, Media, and Embodied Experiences. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 129–155). New York: Routledge.
- Hartmann, T., Krakowiak, K. M., & Tsay-Vogel, M. (2014). How violent video games communicate violence: a literature review and content analysis of moral disengagement factors. *Communication Monographs*, *81*(3), 310–332.
- Hartmann, T., Toz, E., & Brandon, M. (2010). Just a Game? Unjustified virtual violence produces guilt in empathetic players. *Media Psychology*, *14*(1), 339–363.
- Hartmann, T., & Vorderer, P. (2010). It's Okay to Shoot a Character: Moral disengagement in violent video games. *Journal of Communication*, *60*, 94–119.
- Hocking, C. (2007, July 10). Ludonarrative dissonance in Bioshock. Retrieved from http://clicknothing.typepad.com/click_nothing/2007/10/ludonarrative-d.html
- Hughes, T. (1857). *Tom Brown's Schooldays*. United Kingdom: Macmillan Press.
- Iser, W. (1974). *The Implied Reader: Patterns of Communication in Prose Fiction from Bunyan to Beckett*. London: Johns Hopkins University Press.
- Iser, W. (1978). *The Act of Reading: A theory of aesthetic response*. Baltimore: John Hopkins University Press.

- Ivory, J. D., & Kalyanaraman, S. (2007). The effects of technological advancement and violent content in video games on players' feelings of presence, involvement, physiological arousal, and aggression. *Journal of Communication, 57*(3), 532–555.
- Jansz, J., & Martens, L. (2005). Gaming at a LAN Event: The social context of playing video games. *New Media & Society, 7*(3), 333–355.
- Jenkins, H. (2006). The War between Effects and Meaning: Rethinking the Video Game Violence Debate. In David Buckingham & R. Willet (Eds.), *Digital Generations: Children, Young People, and New Media* (pp. 19–31). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Jenkins, H. (2007). Applied game theory, R.I.P.1: melodrama and realism. Retrieved from http://henryjenkins.org/2007/04/applied_game_theory_rip.html
- Jørgensen, K. (2006). On the Functional Aspects of Computer Game Audio. In *Proceedings - Audio Mostly Conference*.
- Jørgensen, K. (2007). “What are Those Grunts and Growls Over There?” *Computer Game Audio and Player Action* (PhD thesis). Copenhagen University, Copenhagen.
- Jørgensen, K. (2012). Between the Game System and the Fictional World: A Study of Computer Game Interfaces. *Games and Culture, 7*, 142–163.
- Juul, J. (2001). Games Telling Stories? A Brief Note on Games and Narratives. *Game Studies, 1*(1). Retrieved from <http://www.gamestudies.org/0101/juul-gts/>

- Juul, J. (2004). Introduction to Game Time / Time to play. In N. Wardrip-Fruin & P. Harrigan (Eds.), *First Person* (pp. 131–142). Cambridge, Mass: MIT Press. Retrieved from <http://www.jesperjuul.net/text/timetoplay/>
- Juul, J. (2005). *Half-Real: Video Games between Real Rules and Fictional Worlds*. The MIT Press.
- Juul, J. (2007). Without a Goal: On Open and Expressive Games. In T. Krzywinska & B. Atkins (Eds.), *Videogame/Player/Text*. Manchester: Manchester University Press. Retrieved from <http://www.jesperjuul.net/text/withoutagoal/>
- Juul, J. (2015, February 11). A brief History of Anti-Formalism in Video Games. Retrieved from <https://www.jesperjuul.net/ludologist/a-brief-history-of-anti-formalism-in-video-games/comment-page-1>
- Kerr, J. H. (2005). *Rethinking Aggression and Violence in Sport*. London: Routledge.
- Kiegler, K., & Moffat, D. C. (2006). Investigating the Effects of Music on Emotions in Games. In *Proceedings of Audio Mostly Conference* (pp. 37–41). Retrieved from http://audiomostly.com/wp-content/uploads/2013/12/amc_proceedings_low.pdf
- King, G. (2002). Die Hard/Try Harder: Narrative, spectacle and beyond, from Hollywood to videogame. In G. King & T. Krzywinska (Eds.), *ScreenPlay: Cinema/videogames/interfaces* (pp. 50–65).
- King, G., & Krzywinska, T. (2002a). Introduction: Cinema/Videogames/Interfaces. In G. King & T. Krzywinska (Eds.), *ScreenPlay: Cinema/videogames/interfaces* (pp. 1–32). London: Wallflower Press.

- King, G., & Krzywinska, T. (Eds.). (2002b). *ScreenPlay: Cinema/Videogames/Interfaces*. London: Wallflower Press.
- King, G., & Krzywinska, T. (2006a). Film Studies and Digital Games. In J. Rutter & J. Bryce (Eds.), *Understanding Digital Games* (pp. 112–128). Sage. Retrieved from <http://digiplay.info/UDG>
- King, G., & Krzywinska, T. (2006b). *Tomb Raiders and Space Invaders: Videogame Forms and Contexts*. I. B. Tauris.
- Klastrup, L. (2003). A poetics of virtual worlds. In *Digital Arts Conference* (pp. 100–109). Melbourne, Australia. Retrieved from <http://hypertext.rmit.edu.au/dac/papers/Klastrup.pdf>
- Klevjer, R. (2002). In Defense of Cutscenes. In F. Mäyrä (Ed.), *Proceedings of Computer Games and Digital Cultures Conference* (pp. 191–202). Tampere, Finland: Tampere University Press.
- Klimmt, C., Schmid, H., Nosper, A., Hartmann, T., & Vorderer, P. (2006). How Players Manage Moral Concerns to Make Video Game Violence Enjoyable. *Communications*, 31, 309–328.
- Konzack, L. (2002). Computer Game Criticism. A method for computer game analysis. In F. Mäyrä (Ed.), *Proceedings of Computer Games and Digital Cultures Conference* (pp. 89–100). Tampere: Tampere University Press.
- Lazarus, R. S. (1991). Cognition and Motivation in Emotion. *American Psychologist*, 46(4), 352–367.
- Leino, O. (2007). Emotions about the Deniable/Undeniable: Sketch for a Classification of Game Content as Experienced. In *Proceedings of DiGRA 2007 Conference*.

- Leino, O. (2010). *Emotions In Play: On the constitution of emotion in solitary computer game play* (PhD thesis). IT University of Copenhagen.
- Linderoth, J. (2013). Beyond the Digital Divide: An Ecological Approach to Gameplay. *Transactions of the Digital Games Research Association*, 1(1).
- Lindley, C. A. (2002). The Gameplay Gestalt, Narrative, and Interactive Storytelling. In F. Mäyrä (Ed.), *Proceedings of Computer Games and Digital Cultures Conference* (pp. 203–215). Tampere: Tampere University Press.
- Livingstone, S. (2002). *Young People and New Media: Childhood and the Changing Media Environment*. London: SAGE.
- Lopes, D. M. M. (2001). The Ontology of Interactive Art. *Journal of Aesthetic Education*, 35(4), 65–81.
- Malaby, T. M. (2007). Beyond Play: A new approach to games. *Games and Culture*, 2(2), 95–113.
- Malliet, S. (2007a). Adapting the Principles of Ludology to the Method of Videogame Content Analysis. *Game Studies*, 7(1). Retrieved from <http://gamestudies.org/0701/articles/malliet>
- Malliet, S. (2007b). *The Challenge of Videogames to Media Effects Theory* (PhD thesis). Catholic University of Louvain.
- McMahan, A. (2003). Immersion, Engagement, and Presence. A method for analysing 3-D video games. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 67–86). New York: Routledge.
- Murray, J. H. (1997). *Hamlet on the Holodeck. The future of narrative in cyberspace*. The MIT Press.

- Murray, J. H. (2005). The last word on ludology versus narratology. In *DiGRA 2005 Conference: Changing Views–Worlds in Play*. Vancouver, BC, Canada. Retrieved from <http://inventingthemedium.com/2013/06/28/the-last-word-on-ludology-v-narratology-2005/>
- Myers, D. (2009). In Search of a Minimalist Game. In *Proceedings of DiGRA 2009. Breaking New Ground: Innovation in games, play, practice and theory*.
- Nacke, L. E. (2009). *Affective Ludology: Scientific Measurement of User Experience in Interactive Entertainment* (PhD Thesis). Blekinge Institute of Technology, Karlskrona, Sweden. Retrieved from <http://hci.usask.ca/publications/view.php?id=178>
- Neill, A. (1996). Empathy and (film) fiction. In D. Bordwell & N. Carroll (Eds.), *Post Theory: Reconstructing film studies* (pp. 175–194). Madison, Wisconsin: University of Wisconsin Press.
- Newman, J. (2002). The Myth of the Ergodic Videogame - Some thoughts on player-character relationships in videogames. *Game Studies*, 2(1). Retrieved from <http://www.gamestudies.org/0102/newman/>
- New Zealand OFLC. (1993). *Films, Videos, and Publications Classification Act 1993*.
- Nitsche, M. (2009). *Video game spaces*. Cambridge, MA: MIT Press.
- Perron, B. (2005). *A Cognitive Psychological Approach to Gameplay Emotions*. Retrieved from <http://www.digra.org/dl/db/06276.58345.pdf>
- Plunkett, L. (2012). Death Race, the World's First Scandalous Video Game. Retrieved from <http://kotaku.com/5889166/death-race-the-first-scandalous-video-game>

- Polman, H., Orobio de Castro, B., & Aken, M. A. G. van. (2008). Experimental Study of the Differential Effects of Playing Versus Watching Violent Video Games on Children's Aggressive Behavior. *Aggressive Behavior*, 34, 256–264.
- Potter, W. J., & Smith, S. L. (2000). The Context of Graphic Portrayals of Television Violence. *Journal of Broadcasting & Electronic Media*, 44, 301–323.
- Prince, S. (1996). True Lies: Perceptual realism, digital images, and film theory. *Film Quarterly*, 49(3), 27–37.
- Prince, S. (2009). Violence. In P. Livingston & C. Plantinga (Eds.), *The Routledge Companion to Philosophy and Film* (pp. 279–288). New York: Routledge.
- Redfern, N. (2005). Film as Text: Radical Constructivism and the Problem of Narrative in Cinema. *Amsterdam International Electronic Journal for Cultural Narratology*, 2. Retrieved from http://cf.hum.uva.nl/narratology/a05_redfern.html
- Ryan, M.-L. (2006). *Avatars of Story*. University of Minnesota Press.
- Salen, K., & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals*. MIT Press.
- Schott, G. (2008). Language-GAME-Players: Articulating the pleasures of “violent” game texts. *Loading...*, 1. Retrieved from <http://journals.sfu.ca/loading/index.php/loading/article/view/41>
- Schott, G., & Burn, A. (2004). Art (re)production as an expression of collective agency within Oddworld fan-culture. *Works and Days*, 22(43/44).

- Schott, G., & Van Vught, J. (2013). Replacing Preconceived Accounts of Digital Games with Experience of Play: When parents went native in GTA IV. *Transactions of the Digital Games Research Association, 1*(1).
- Schott, G., Vught, J. V., & Marczak, R. (2013). Not knowing: locating player experience between ideal and active play. In B. Bigl & S. Stoppe (Eds.), *Playing with Virtuality: Theories and Methods of Computer Game Studies* (pp. 115–133). Berlin: Peter Lang Publishing.
- Seif El-Nasr, M., & Yan, S. (2006). Visual attention in 3D video games. Presented at the 2006 ACM SIGCHI international conference on Advances in computer entertainment technology, New York, NY, USA. <https://doi.org/10.1145/1178823.1178849>
- Shapiro, M. A., & Chock, T. M. (2003). Psychological Processes in Perceiving Reality. *Media Psychology, 5*, 163–198.
- Sherry, J. L. (2001). The Effects of Violent Video Games on Aggression. *Human Communication Research, 27*(3), 409–431.
- Shklovsky, V. (1965). Art as Technique. In L. T. Lemon & M. J. Reis (Eds.), *Russian Formalist Criticism: Four Essays* (pp. 3–24). Lincoln: University of Nebraska Press.
- Sicart, M. (2009). *The Ethics of Computer Games*. Cambridge, MA: MIT Press.
- Sicart, M. (2011). Against Procedurality. *Game Studies, 11*(3). Retrieved from http://gamestudies.org/1103/articles/sicart_ap
- Smith, J. H. (2006). *Plans and Purposes: How Videogame Goals Shape Player Behaviour* (PhD thesis). IT University of Copenhagen, Copenhagen.
- Smith, M. (1995). *Engaging Characters. Fiction, emotion, and the cinema*. Oxford: Oxford University Press.

- Smith, S. L., Lachlan, K., & Tamborini, R. (2003). Popular video games: Quantifying the presentation of violence and its context. *Journal of Broadcasting & Electronic Media*, 47(1), 58–76.
- Steiner, P. (2014). *Russian Formalism. A metapoetics*. Geneva: sdvig press.
Retrieved from <http://www.sdvigpress.org/dox/101439/101439.pdf>
- Suits, B. H. (1978). *The Grasshopper: Games, life, and utopia*. Toronto: University of Toronto Press.
- Tamborini, R. (2000). The Experience of Telepresence in Violent Video Games. Presented at the 86th annual convention of the National Communication Association, Seattle. Retrieved from <http://icagames.comm.msu.edu/VG&T.pdf>
- Tamborini, R., Eastin, M. S., Skalski, P., Lachlan, K., Fediuk, T. A., & Brady, R. (2004). Violent Virtual Video Games and Hostile Thoughts. *Journal of Broadcasting & Electronic Media*, 48(3), 335–357.
- Tan, E. S. (1996). *Emotion and the structure of narrative film. Film as an emotion machine*. Mahwah, N.J: Erlbaum.
- Tan, E. S., & Jansz, J. (2008). The game experience. In H. N. J. Schifferstein & P. Hekkert (Eds.), *Product Experience* (pp. 531–556). Amsterdam: Elsevier.
- Tavinor, G. (2009a). *The Art of Videogames*. Oxford: Wiley Blackwell.
- Tavinor, G. (2009b). Videogames, Interactivity, and Art. *Aesthetics-Online*.
- Tavinor, G. (2011). Video Games as Mass Art. *Contemporary Aesthetics*, 9.
Retrieved from <http://www.contempaesthetics.org/newvolume/pages/article.php?articleID=616>

- Taylor, L. N. (2002). *Video Games: Perspective, Point-of-view, and immersion*.
University of Florida.
- Taylor, L. N. (2003). When Seams Fall Apart. Video game space and the player.
Game Studies, 3(2).
- Thompson, K. (1981). *Eisenstein's "Ivan the Terrible": A Neoformalist Analysis*.
Princeton, New Jersey: Princeton University Press.
- Thompson, K. (1988). *Breaking the Glass Armor. Neoformalist Film Analysis*.
Princeton, New Jersey: Princeton University Press.
- Thompson, K. M., Tepichin, K., & Haninger, K. (2006). Content and ratings of
mature-rated video games. *Archives of Pediatrics & Adolescent Medicine*,
160(4), 402–410.
- Thomson-Jones, K. (2009). Formalism. In P. Livingston & C. Plantinga (Eds.), *The
Routledge Companion to Philosophy and Film* (pp. 131–141). New York:
Routledge.
- Tong, W. L., & Tan, M. C. C. (2002). Vision and Virtuality: The construction of
narrative space in film and computer games. In G. King & T. Krzywinska
(Eds.), *ScreenPlay: Cinema/videogames/interfaces* (pp. 98–109). London:
Wallflower Press.
- Treanor, M. (2013). *Investigating Procedural Expression and Interpretation in
Videogames*. University of California at Santa Cruz, Santa Cruz.
- Treanor, M., & Mateas, M. (2011). BurgerTime: A Proceduralist Investigation. In
Proceedings of DiGRA 2011 Conference: Think Design Play. Utrecht.
- Treanor, M., Schweizer, B., Bogost, I., & Mateas, M. (2011). Proceduralist
Readings: How to Find Meaning in Games with Graphical Logics. In
Proceedings of Foundations of Digital Games. Bordeaux, France.

- Vught, J. V., & Schott, G. (2012). Player Experience: Articulating suspense as a configurative encounter. *Westminster Papers*, 9(1), 93–106.
- Vught, J. V., Schott, G., & Marczak, R. (2012). Age-Restriction: Re-examining the interactive experience of “harmful” game content. In *Proceedings of DiGRA Nordic 2012 Conference: Local and Global – Games in Culture and Society*.
- Walton, K. L. (1990). *Mimesis as Make-Believe. On the Foundations of the representational Arts*. Cambridge, MA: Harvard University Press.
- Ward, P. (2002). Videogames as Remediated Animation. In G. King & T. Krzywinska (Eds.), *ScreenPlay: Cinema/videogames/interfaces* (pp. 122–135). London: Wallflower Press.
- White, M. M. (2012). L2P NOOB: Examining Tutorials in Digital Games. *Loading...*, 6(10). Retrieved from <http://journals.sfu.ca/loading/index.php/loading/article/viewArticle/109>
- Wolf, M. J. P. (Ed.). (2001a). *The Medium of the Video Game*. Texas: University of Texas Press.
- Wolf, M. J. P. (2001b). Time in the Video Game. In M. J. P. Wolf (Ed.), *The Medium of the Video Game* (pp. 77–91). Austin, TX: University of Texas Press.
- World Health Organization. (2002). *World report on violence and health*. Geneva. Retrieved from http://www.who.int/violence_injury_prevention/violence/world_report/en/
- Zagal, J. P. (2010a). *Ludoliteracy: Defining, Understanding, and Supporting Games Education* (1st ed.). Pittsburgh: ETC Press. Retrieved from <http://www.ludoliteracy.com/>

- Zagal, J. P. (2010b). Manhunt: The dilemma of play. In D. Davidson (Ed.), *Well-Played 2.0* (pp. 241–243). Pittsburgh: ETC Press.
- Zagal, J. P. (2012). Encouraging Ethical Reflection with Videogames. In J. P. Zagal (Ed.), *The Videogame Ethics Reader* (pp. 67–82). San Diego: University Readers, Inc.
- Zillmann, D. (1996). The Psychology of Suspense in Dramatic Exposition. In P. Vorderer, H. J. Wulff, & M. Friedrichsen (Eds.), *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 199–231). New York: Routledge.
- Zillmann, D. (1998). The Psychology of the Appeal of Portrayals of Violence. In J. H. Goldstein (Ed.), *Why We Watch. The Attractions of Violent Entertainment* (pp. 179–211). Oxford: Oxford University Press.

Ludography

- 2K Games (2007). *Bioshock*. [Xbox360]. 2K Games.
- 2K Marin (2010). *Bioshock 2*. [Xbox360]. 2K Games.
- 3d Realms (2011). *Duke Nukem Forever*. [Windows]. 2K Games.
- Apogee Software (1991). *Duke Nukem* [Windows]. Apogee Software.
- Atari Inc. (1972). *Pong*. [Arcade]. Atari Inc.
- BeamNG (2013). *BeamNG.drive* [platform]. BeamNG.
- Bethesda Game Studios (2006). *The Elders Scroll IVs: Oblivion*. [Windows]. 2K Games.
- Bethesda Game Studios (2011). *The Elders Scrolls V: Skyrim*. [Windows]. Bethesda Softworks.
- Brøderbund (1989). *Prince of Persia*. [Amiga]. Brøderbund.

- Bungie (2004). *Halo II*. [Xbox 360]. Microsoft Game Studios.
- Capcom (1996). *Resident Evil*. [PlayStation 2]. Capcom.
- Core Design (1996). *Tomb Raider*. [PlayStation 2] Eidos Interactive.
- Croteam (2011). *Serious Sam 3: BFE*. [Windows]. Devolver Digital.
- Crystal Dynamics (2002). *Blood Omen 2*. [PlayStation 2]. Eidos Interactive.
- Crystal Dynamics (2013). *Tomb Raider*. [Windows]. Square Enix.
- Cyan (1993). *Myst*. [Mac OS]. Brøderbund.
- Cyan (1997). *Riven*. [Windows]. Red Orb Entertainment.
- Data East (1982). *BurgerTime*. [Arcade]. Data East.
- DMA Design (1997). *Grand Theft Auto*. [MS-DOS]. BMG interactive.
- DMA Design (1999). *Grand Theft Auto II*. [Windows]. Rockstar Games.
- EA DICE (2008). *Mirror's Edge*. [Xbox 360]. Electronic Arts.
- EA DICE (2011). *Battlefield 3*. [Windows]. Electronic Arts.
- EA Los Angeles (2007). *Medal of Honor: Vanguard*. [PlayStation 2]. EA Games.
- Epic Games (2006). *Gears of War*. [Xbox 360]. Microsoft Studios.
- Exidy (1976). *Death Race*. [Arcade]. Exidy.
- Humble, Rod (2006). *The Marriage*. [Windows]. Humble.
- id Software (1992). *Wolfenstein 3D*. [MS-DOS]. Apogee Software.
- id Software (1993). *Doom*. [MS-DOS]. GT Interactive.
- id Software (1996). *Quake*. [Amiga]. GT Interactive.
- id Software (1999). *Quake III Arena*. [Windows]. Activision.
- Illusion Soft (2006). *Rapelay*. [Windows]. Illusion Soft.
- Infinity Ward (2009). *Call of Duty: Modern Warfare 2*. [Xbox 360]. Activision.
- Infinity Ward (2013). *Call of Duty: Ghosts*. [Xbox 360]. Activision.
- IO Interactive (2006). *Hitman: Blood Money* [PlayStation 2]. Eidos Interactive.

IO Interactive (2012). *Hitman: Absolution*. [Windows]. Square Enix.

Irrational Games (2013). *Bioshock Infinite*. [Xbox 360]. 2K Games.

Klei Entertainment (2010). *Shank*. [Windows]. Electronic Arts.

Konami (1999). *Silent Hill*. [PlayStation 2]. Konami.

List (1984). *Tetris*. [Windows]. List.

Looking Glass Studios (1998). *Thief: The Dark Project*. [Windows]. Eidos Interactive.

LucasArts (1999). *Star Wars Episode 1: Racer*. [Windows]. LucasArts, Nintendo.

Massive Entertainment (1996). *Ground Control*. [Windows]. Sierra Entertainment.

Midway Games (1992). *Mortal Kombat*. [Arcade]. Midway Games.

Monolith Productions (2005). *F.E.A.R.* [Windows]. Sierra Entertainment.

Monolith Productions (2008). *Condemned 2: Bloodshot*. [Xbox 360]. Sega.

Monolith Productions (2014). *Middle Earth: Shadows of Mordor*. [Windows]. Warner Bros. Interactive Entertainment.

Namco (1980). *Pac-Man*. [Arcade]. Namco.

Naughty Dog (2013). *The Last of Us*. [PlayStation 3]. Sony Computer Entertainment.

Nintendo (2009). *New Super Mario Bros. Wii*. [Wii]. Nintendo.

Nintendo (1985). *Super Mario Bros.* [NES]. Nintendo.

Number None, Inc. (2009). *Braid*. [OS X]. Microsoft Game Studios.

Obsidian Entertainment (2014). *South Park: The Stick of Truth*. [Windows]. Ubisoft.

PlatinumGames (2010). *MadWorld*. [Wii]. Sega.

Polytron Corporation (2013). *Fez*. [Windows]. Trapdoor.

PopCap (2001). *Bejeweled* [Mac OS X]. PopCap.

Quantic Dream (2010). *Heavy Rain*. [PlayStation 3]. Sony.

Rare (1997). *GoldenEye 007*. [Nintendo 64]. Nintendo.

Raven Software (2000). *Soldier of Fortune*. [Windows]. Activision.

Remedy Entertainment (2001). *Max Payne*. [PlayStation 2]. Rockstar Games.

Remedy Entertainment (2010). *Alan Wake*. [platform]. Microsoft Studios.

Rockstar North (2005). *Grand Theft Auto: San Andreas*. [Xbox 360]. Rockstar Games.

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

Rockstar North (2013). *Grand Theft Auto V*. [Xbox 360]. Rockstar Games.

Rockstar North (2003). *Manhunt*. [PlayStation 2]. Rockstar Games.

Rockstar San Diego (2010). *Red Dead Redemption*. [Xbox 360]. Rockstar Games.

Rockstar Studios (2012). *Max Payne 3*. [Windows]. Rockstar Games.

Rockstar Vancouver (2006). *Bully*. [PlayStation 2]. Rockstar Games.

Somethin' Else (2010). *Papa Sangre*. [IOS]. Somethin' Else.

Stainless Games (1997). *Carmageddon*. [Windows]. SCI.

Taito (1978). *Space Invaders*. [Arcade]. Taito.

Team Meat (2010). *Super Meat Boy*. [Windows]. Team Meat.

Techland (2011). *Dead Island*. [Windows]. Deep Silver.

Technos Japan (1987). *Double Dragon*. [Amiga]. Technos Japan.

Telltale Games (2012). *The Walking Dead*. [iOS]. Telltale Games.

Thatgamecompany (2006). *Flow*. [PlayStation 3]. Sony Computer Entertainment.

Thatgamecompany (2009). *Flower*. [PlayStation 3]. Sony Computer Entertainment.

The Fullbright Company (2013). *Gone Home*. [Windows]. The Fullbright Company.

Torus Games (2000). *Carmageddon TDR 2000*. [Windows]. SCI.

Ubisoft (2007). *Assassins Creed*. [Xbox 360]. Ubisoft.

Ubisoft Montreal (2003). *Prince of Persia: The Sands of Time*. [PlayStation 2].
Ubisoft.

United States Army (2009). *America's Army 3*. [Windows]. United States Army.

Valve Corporation (1998). *Half Life*. [Windows]. Valve Corporation.

Valve Corporation (2004). *Half Life 2*. [Xbox 360]. Valve Corporation.

Valve Corporation (2007). *Portal*. [Windows]. Valve Corporation.

Valve Corporation (2007). *Team Fortress 2*. [Windows]. Electronic Arts.

Volition, Inc. (2005). *The Punisher*. [PlayStation 2]. THQ.

Westwood Pacific (2000). *Command and Conquer: Red Alert 2*. [Windows]. EA
Games.

Westwood Studios (1996). *Command and Conquer: Red Alert*. [Windows]. Virgin
Interactive.

Filmography

Balcon, M. (Producer), & A. Hitchcock (Director). (1936). *Sabotage* [Motion
Picture]. United Kingdom: GFD Ltd.

Beatty, W. (Producer), & A. Penn (Director). (1967). *Bonnie and Clyde* [Motion
Picture]. United States: Warner Bros.-Seven Arts.

Bryce, I., et al. (Producer), & S. Spielberg (Director). (1998). *Saving Private Ryan*
[Motion Picture]. United States: Dreamworks Pictures.

Caro, J. (Producer), & T. Singh (Director). (2000). *The Cell* [Motion Picture].
United States: New Line Cinema.

Corman, R. (Producer), & P. Bartel (Director). (1975). *Death Race 2000* [Motion
Picture]. United States: New World Pictures.

- Eisenstein, S. (Producer), & S. Eisenstein (Director). (1958). *Ivan the Terrible* [Motion Picture]. Soviet Union.
- Feldman, P. (Producer), & S. Peckinpah (Director). (1969). *The Wild Bunch* [Motion Picture]. United States: Warner Bros.-Seven Arts.
- Figgis, M, et al. (Producer), & M. Figgis (Director). (2000). *Timecode* [Motion Picture]. United States: Screen Gems.
- Foster, L., et al. (Producer), & T. Scott (Director). (2004). *Man on Fire* [Motion Picture]. United States: 20th Century Fox.
- Garland, A. (Producer), & P. Travis (Director). (2012). *Dredd* [Motion Picture]. United Kingdom: DNA Films.
- Hughes, J., et al. (Producer), & J. Hughes (Director). (1986). *Ferris Bueller's Day Off* [Motion Picture]. United States: Paramount Pictures.
- Ichise, T., et al (Producer), & H. Nakata (Director). (1998). *Ring* [Motion Picture]. Japan: Toho.
- Kong, B., et al. (Producer), & A. Lee (Director). (2000). *Crouching Tiger, Hidden Dragon* [Motion Picture]. Taiwan: Sony Pictures Classic.
- Kuk, L., et al. (Producer), & J. Woo (Director). (1992). *Hard Boiled* [Motion Picture]. Hong Kong: Golden Princess Film Production.
- Lawrence, G., et al. (Producer), & J. McTiernan (Director). (1987). *Predator* [Motion Picture]. United States: 20th Century Fox.
- McCallum, R. (Producer), & G. Lucas (Director). (1999). *Star Wars Episode 1: The Phantom Menace* [Motion Picture]. United States: Lucasfilm Ltd.
- Silver, J. (Producer), & The Wachowski Brothers (Director). (1999). *The Matrix* [Motion Picture]. United States: Warner Bros.

Tanen, N. (Producer), & J. Hughes (Director). (1985). *The Breakfast Club* [Motion Picture]. United States: Universal Pictures.