Playing Horror –Narrative and Genre in Valve's *Left 4 Dead* Series

Iris Schäfer

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Department of Art and Culture Studies

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JYVÄSKYLÄN YLIOPISTO

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Tiivistelmä – Abstract The place of story and narrative in digital games has been a hotly contested topic within the field of Game Studies during the past two decades. Beyond the question of whether games can or should be used for telling stories, research interest has focused on the nature of game narratives and their distinct qualities in comparison to other expressive media, like literature and film. The aim of this thesis is to contribute to this debate by examining the elements involved in storytelling not in digital games overall, but in one particular series, namely Valve Software's Left 4 Dead and Left 4 Dead 2. The use of this in-depth case study allows an examination of how various different elements contribute to the series' particular horror narrative and story as opposed to delineating how one specific element can function in a variety of game fictions. The elements considered consist both of those borrowed or adopted from other expressive media, as well as some specific to game fictions and identified in previous research in the field. With the particular subject of horror game fiction and an additional theoretical background of horror fictions it is possible to examine how these various narrative constituents can be used for a specific narrative purpose, namely the conveyance of events in a threatening and horrific atmosphere. As a result, this thesis offers a concrete example of how diverse aspects of a game contribute in an interrelated and tightly interdependent way to the creation of game narrative and story. Asiasanat – Keywords		
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JYVÄSKYLÄN YLIOPISTO

Tiedekunta – Faculty	Laitos – Department	
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Tarinan ja narratiivin rooli digitaalisissa peleissä on ollut pelitutkimuksen kiistakapula viimeisen kahden vuosikymmenen aikana. Sen lisäksi, että on kysytty voidaanko ja tulisiko pelejä käyttää kertomaan tarinoita, tutkimus on on keskittynyt pelinarratiivien luonteeseen ja niiden muista medioista, kuten kirjallisuus tai elokuvat, eroaviin piirteisiin. Tämän tutkielman tarkoitus on osallistua tähän keskusteluun tutkimalla tarinankerronnan elementtejä tietyssä pelisarjassa, Valve Softwaren Left 4 Dead ja Left 4 Dead 2. Tämä tapaustutkimus mahdollistaa sen tarkastelun, miten erilaiset tekijät vaikuttavat sarjan kauhunarratiiviin ja tarinaan, sen sijaan, että tarkasteltaisiin sitä, miten yksi tekijä voi toimia monissa erilaisissa pelifiktioissa. Tarkasteltavat elementit koostuvat sekä niistä, jotka on lainattu muista medioista, että niistä, jotka ovat ominaisia pelifiktioille ja tunnistettu aiemmassa tutkimuksessa. Kauhupelifiktion aiheella ja kauhufiktion teoreettisella taustalla on mahdollista tarkastella, miten nämä erilaiset narratiiviset ainesosat voidaan käyttää johonkin tiettyyn narratiiviseen tarkoitukseen, nimittäin tapahtumien kuvaamisen uhkaavassa ja kauhistuttavassa ilmapiirissä. Tuloksena tämä tutkielma tarjoaa konkreettisen esimerkin siitä, miten erilaiset pelin osa-alueet vaikuttavat pelin narratiivin ja tarinan luomiseen toisiinsa liittyvällä ja tiukasti toisistaan riippuvalla tavalla.		
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1. Introduction

Digital games fascinate for the stories they may tell, as well as for the complex rule-based systems they constitute. These two elements are conventionally seen as separate areas: a game is a rule-based system and a game can tell stories, but they have little to do with each other. Discussions of game narrative are largely dominated by obviously representational elements already familiar to us from other narrative media, such as literature and film. The focus of attention is geared towards land- and soundscape, spoken and written dialogue, character appearance and description – press A to jump on the other hand is only rarely considered a narrative element. However, in the majority of the *Super Mario* games, jumping is a core element of driving the plot forwards, with the players' need to press the controller's A button shaping their experience of the story by implementing tension and a degree of uncertainty into Mario's quests. Without the players' experience of playing Mario, his story would lose its sense of challenge and struggle, yet the story of *Super Mario Bros.*(1985) is discussed primarily by what can be seen on the screen, ignoring what can be experienced through the controls.

An often and controversially discussed example of the expressive potential of game rules and mechanics is another classic game: *Tetris* (1984). In her book *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, Janet Murray gave the following rather free interpretation of *Tetris*:

This game is 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 out desks in order to make room for the next onslaught. (144)

Murray has been much criticized for this statement, which fuses the expressive power of the game with her own personal association caused by it, going beyond what the game has to offer in a search for narrative. In "The Gaming Situation," MarkkuEskelinen is particularly adamant about rejecting Murray's view, accusing her of "project[ing] her favourite content in it," rather than "studying the actual game." While Eskelinen seems to believe that Murray's interpretation is purely a figment of her imagination, I agree with scholar and game designer Ian Bogost's view on this debate, that Murray's statement is "grounded in rules, even if that grounding is unspoken" (*Unit Operations*101). Murray clearly recognizes and drawson the sense of rush and organized futility of trying to hold the inevitable at bay, instilled by *Tetris*' gameplay. Rules and mechanics do not by themselves tell stories, but they do – as the example of *Tetris* shows – contribute to a certain mood and may form the underlying dynamic of a story. Rules and mechanics as well as space, sound and image could not by themselves be

seen as stories, the same way elements of cinema, such as light, color and camera angles are not stories. They are constituents of the language of digital games. All games are systems, while not all games have narratives. This does not mean that the game system is not involved in the construction of narrative in the games that do.

In recent years, there has been an increasing amount of research into elements particular to games and their expressive potential and impact on narrative. Henry Jenkins has coined the term narrative architecture to describe the way the structure and content of the game space drives narrative; Ian Bogost explores the expressive power of processes in both *Unit Operations* and *Persuasive Games*, coining the term procedural rhetorics in the latter. The concept of narratives that emerge from gameplay rather than being scripted is explored in theories regarding emergent, experiential or interactive narrative (see for example Calleja or Lindley). However, in the majority of cases, these phenomena have been discussed in an isolated form, describing the particular constituent's function and potential in regard to narrative in detail, but in consequence omitting how it may interact with other narrative constituents.

In this thesis, I therefore aim to present a more holistic approach. Rather than to examine the function of one narrative component in a number of games, I have chosen Valve Software's *Left 4 Dead* series¹ as a single case study to examine how different game elements interrelate and contribute to form the series' horror narrative. To achieve this, I will not only draw on the game-centric concepts mentioned above, but also take into account narrative elements that can be found in other media as well (or predominantly). The focus of this analysis lies not on any of these individual constituents, but on their combined effort to produce narrative.

At this point, I believe it is necessary to more specifically expand on what I mean by narrative, as narrative in games has been a contested topic in the field of game studies and the term has consequentially been used with many widely varying definitions. I agree with most scholars in the field, that a strict, formalist definition from the field of literature that identifies narrative as a fixed sequence of events can never be simply applied to games because it derives from the study of storytelling specifically targeted at a different medium. However, I do not mean to resort to such vague and permissive definitions as for example Jenkins' concept of "transmedia storytelling" ("Game Design As...") or Salen and Zimmerman's musings on the narrative of Poker (388). Even though narrative sequences in games cannot be fixed in the strictest sense because the player interacts with and thereby introduces a level of

¹ Comprised of the two narratively linked titles Left 4 Dead (2008) and Left 4 Dead 2 (2009)

unpredictability to the game, they are nevertheless usually not arbitrary. The game structures the player's journey through its story by limiting their available actions and determining their access to and experience of the game world. In his article "Narrative Structures in Computer and Video games," Barry Ip defines narrative rather straight-forwardly as "the unique way in which story is being presented to the audience" (107), which I believe to be the most useful definition to date as it encompasses both games and other narrative forms without conflating narrative and story. Despite the complications that games' openness to player input poses to a traditionalist view of narrative, many games – my case study included – relay a certain story to their players in a certain (although often not completely determined) way. The structured freedom that the player is given in a digital game, should not be seen as a deviation or interruption of a narrative's fixed sequence, but a means for narrative to more dynamically present that sequence.

The *Left 4 Dead* series tells the story of two groups of human survivors, stranded in urban North America during the zombie-apocalypse, and their strugglesto get rescued. The player's actions and experience of play form a vital component to the way the story is presented, without ever threatening to derail it. Similar to other Valve games like *Half Life* (1998) and *Portal* (2007), the *Left 4 Dead* games eschew the use of cutscenes or lengthy passages of text to advance the game's plot, instead shifting narrative progression nearly completely onto moments of play. Without taking active play into account as a narrative element, the series would only have a very limited amount of narrative, as generally all but the initial and final scenes of each campaign are relayed through the player avatar's first person perspective while the player is engaged in play. This means, that there are always multiple constituents – elements unique to games as well as not – at work in creating and developing the whole of the series' narrative. This makes the *Left 4 Dead* series an ideal case study to examine the interrelation of these different constituents and their contribution to the series' narrative as "the unique way that story is being presented."

In the following, I will more in depth describe my methodology in the second chapter of this thesis, before moving on to outlining the current understanding of narrative strategies at use in digital games in chapter three. In chapter four, I will be looking at the genre of horror to be able to explore how the *Left 4 Dead* games identify themselves as part of this genre and how various elements of the game are used to create an atmosphere of horror during the following analysis in chapter five. While my case study is not set up to isolate any particular narrative constituents, but to keep an eye on the large picture, I have nevertheless divided the series' narrative construction into three main areas that all make distinct, but linked

contributions to the player experience of narrative. These main areas are the game environment that the story takes place in, the bodies that players inhabit and encounter in it and lastly the game processes, in particular the collection of systems known as the "AI Director" (Booth, "AI Systems" 55), responsible for regulating pace and thereby also largely the mood of the games.

In this thesis, I aim to give new impulses to consider what narrative means and how it works in digital games. While the findings in this thesis may not offer any general answers, my hope is that they will indicate the potential for coherent game narratives by illustrating how various game elements contribute to a coherent genre-appropriate narrative in the *Left 4 Dead* series.

2. Methodology

As mentioned above, I mean to examine the issue of narrative in digital games through the use of a single case study, that is the study of "only one event, process, person, organization unit or object" (Routio, "Case Study"), in this case Valve Software's *Left 4 Dead* series. This approach is highly qualitative in nature and without the use of supplementary comparative or quantitative methods cannot be used to "unearth generally valid knowledge" (ibid). However, the aim of this thesis is not to discover narrative elements universally applicable to all digital games, but to study the *Left 4 Dead* series as a "holistic entit[y]" (Routio, "Selecting"), whose specific narrative characteristics may be tested for validity beyond the scope of this specific case in subsequent research. But before this subsequent research can be contemplated, there first needs to be a more precise understanding of what these characteristics are and how they produce the final product: the narrative and story of the *Left 4 Dead* series.

I have chosen a primarily descriptive approach, that is, an "approach which aims primarily at gathering *knowledge*" (Routio, "Planning") to this subject matter, as opposed to a normative approach that "tries to define how things *should be*" (ibid). The reason for this choice is that in the comparatively young field of game studies, both academics and game designers have written extensively about how games do and should work and what should and should not be seen as an essential characteristic of a digital game or game in general. Especially with regard to narrative in games, many authors concern themselves with an ideal situation, a narrative potential that they believe digital games could and should incorporate, but so far have not been able to achieve. Even texts, whose expressed purpose it is to describe the contemporary state of game narratives, such as Barry Atkins' *More Than a Game*, are filled with colorful descriptions of a future in which games have realized their narrative potential:

Somewhere in the storytelling of the game-fictions I focus upon, I see fictional possibility and fictional promise [...] But it is already possible to foresee a not too distant future in which the progress of processor technology, if combined with the creative flair we are used to seeing applied in our other forms of popular entertainment, could lead to the development of a generation of games that transcend the pejorative classification of children's entertainment and are taken seriously as mass-appeal novels and films occasionally are. It would not take too much of a leap of the imagination to see the computer game develop into something like a new form of soap opera or action movie. (Atkins 23-24)

I feel that in the desire to usher in a form of golden age of game fictions, in which game narratives have reached an always subjective full potential, we get ahead of ourselves and

might miss what exactly it is that game narratives actually *are*, because we focus too much on what we want them to *become*.

I concentrate on a descriptive approach precisely to highlight what-already-is over the what-should-be that is very present in this field. I believe that the *Left 4 Dead* series does what it means to do very well, succeeding in presenting a coherent and well thought out zombie survival narrative. I do not want to find out how the series could do it better, nor even (at least at this stage) how others could replicate their achievement. My goal is to simply find out how it does it, with the hope of advancing our understanding of what narrative in digital games is and only subsequently of what it can be. To this end, I will conduct a close reading of the series with a particular focus on the interellation of various game elements and their contribution to the series' storytelling effort.

My data for this research consists predominantly of that which is available to the average player when playing Left 4 Dead and Left 4 Dead 2 on the PC. This includes the audiovisual content of the game, more precisely everything that can be seen on the screen, the diegetic² content of the game world as well as the superimposed graphical user interface as well as the diegetic soundscape and the soundtrack of the game. Instances of voice chat in multiplayer games are not considered, because although they have an effect on the player's experience of the game and possibly also its story, they are not strictly speaking part of the diegetic game content and are more appropriately placed on a reflective level of the game experience, rather than a narrative one.³ Further included are the non-graphical components of the player-game interface, that is, the player's access to the game via the controls and their incorporation in a game avatar. This means also paying attention to the way the player may move and act within the game world as well as their subjective experience and understanding of the game's rules, mechanics and dynamics. Additionally to the data available from access to the games themselves, I will use supplementary data made available by some of the creators of the series (see Booth and Mitchell). This data is used to gain a deeper understanding of the mechanics and dynamics of the game (especially related to AI behavior) otherwise not available to the average player.

In analyzing this data, I will firstly draw on a body of theory about narrative practices in digital games. I do not intend to simply map the existing theories on the various areas of the game as this may create conceptual blind spots at the crucial points where the different

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² internal to the fictional game world

³ This is also essentially the problem with Salen's and Zimmerman's thoughts on the narrativity of Poker referenced in the introduction. The articulation of player behavior is not part of narrative, but rather an assessment of the game progress from a perspective that is (momentarily) dissociated from the game.

models intersect and may render invisible where they do not apply at all. Rather, I want to use these theories as supplementary information in order to be able to investigate the *Left 4 Dead* series on the level of current research and to be able to identify where the theories apply, where they may need to be modified and where the games transcend them.

In the following chapter I will begin my overview of the existing theory with those modes of narrative that are adapted from older narrative media in a way that leaves them largely structurally intact and does not take into account the specific features of digital games as a medium: literary narration in the form of on-screen text and cinematic narration in the form of cutscenes. Even though these narrative modes are not as heavily used in my case study as they are in many other games, they are nevertheless significant as some of the earliest methods of storytelling in games. It is therefore important to consider how the *Left 4 Dead* series transforms these methods to become compatible with a playable environment. In this section, I will use Jay David Bolter's and Richard Grusin's concept of remediation as an overarching theory in order to explain these instances of cross-media borrowing and adaption. I will also make comparisons to the way literary narration was and is used in film, drawing on concepts of film as well as game studies.

I will further give an overview of the existing concepts describing modes of narrative or meaning-making within gameplay, which use rather than exclude player activity. These consist for one of the theoretical background on emergent or experiential narrative, or narrative as a result of player activity. Here, I will draw heavily on Gordon Calleja's work. The second part of this section deals with Henry Jenkins' concept of narrative architecture, but incorporates also other scholars' notions on space in games and its relation to player and narrative. The last concept explored in this section deals with meaning making through processes or what Ian Bogost refers to as unit operations. This part will largely feature the contents of Bogost's *Persuasive Games* and Wardrip-Fruin's *Expressive Processing*.

A secondary body of theory I mean to use for this thesis deals with the genre of horror and the connected concepts of the abject and bodily perception. An understanding of horror fiction and its conventions is important to understand and acknowledge the *Left 4 Dead* series' narration. The series' story constitutes a classic horror story and a standard example of the zombie apocalypse subgenre. Like any horror story, it relies on evoking feelings of fear and disgust and aims to get its audience (its players) to respond to events portrayed in a physical way. Therefore, a theoretical background of horror becomes necessary to understand why certain design choices were made and how they affect the narrative in a genreappropriate way. It further allows me to explicate where the series employs literary or

cinematic techniques of horror even where it does not structurally adhere to literary or cinematic narration and where it uses the expressive potential unique to digital games to achieve a horrific effect.

In this section, I will begin by laying out the concept of body genres, a term coined by Linda Williams for narrative genres (particularly in film) that rely heavily on enticing a physical reaction from their audience. These body genres consist of pornography, melodrama and, of course, horror. Here, I will also give a more general account of our bodily involvement in perception of fiction, following Maurice Merleau-Ponty's *Phenomenology of Perception* as well as Vivian Sobchack's *Carnal Thoughts* and discuss the involvement of the body in reading game fictions. This is followed by a more detailed explanation of the aesthetics of horror and its effects on its audience, based on Noël Carrol's *Philosophy of Horror* and Julia Kristeva's landmark *Power of Horror*, in which she articulates the concept of the abject. After laying out this more general theoretical groundwork on horror, I will move on to regard the established conventions of horror film, the actualization of horror on screen and the rhetoric of conventional narrative structures in horror film. Special attention is also paid to the zombie as a particular horrific creature and its depictions and meanings in zombie films and other fictions.

With this theoretical background and the data available to me, I aim to give a detailed account of the way the *Left 4 Dead* series creates a horror narrative during and around play. In doing so, I do not only mean to test the existing narrative concepts in the field for their validity, but further present an example of the way various aspects of a digital game may achieve a certain narrative goal in a concerted effort.

3. Narrative Strategies in Games

In any examination of digital games as narrative vehicles, there is a danger of rendering invisible those games that do not tell stories, or abstract games. Abstract games eschew representational elements; the objects within them are not presented as *characters* and the playing field, in which the action takes place, is not presented as a world. In short, abstract games are not narrative. Barry Ip defines narrative as "the unique way in which story is being presented to the audience" (107), basing his definition on that of H. Porter Abbott, who sees narrative as "the representation of an event or a series of events" (Abbott in Ip 106). The keyword representation is also foregrounded by narratologists like Gerald Prince, who defines narrative as "the representation of real or fictive events and situation in a time sequence" (1). Narrative is essentially representational, which is why abstract games like *Tetris* are generally understood as non-narrative. Tetris contains events and even sequences of events, but these events are not represented through anything else, nor do they themselves represent anything. They simply occur: shapes floating down the screen. In representational games, the event of shapes meeting on the screen also doubles as a representation of another event: two characters having a conversation, one piece in the sequence of events that makes up the story. 4 This does not mean that abstract games do not relay any sort of meaning whatsoever, as discussed in the introduction, but rather that the game itself does not develop and unambiguously present a representational dimension to the player.

Not all of what is commonly defined as an abstract game is entirely abstract: most modern versions of chess include figures that clearly represent two opposed kingdoms and their respective population, but the game makes no attempt to make sense of the situation. The reading of a war-type confrontation stands to reason, but is not unambiguous, as the only explicit representational dimension of the game is limited to the appearance of the figures. That said, as we have seen, even the much more thoroughly abstract *Tetris* is open to interpretation. On the other end of the spectrum are games with very clear narrative ambitions, placing objects, game space, goals and gameplay into a distinct representational context. These games also tell a particular, recountable story.

The presence of story is essential for there to be narrative as, following Ip, narrative presents story (although this does not automatically require that this story must be static and unchanging or even repeatable). Story, as defined by Ip, is "the information about an event or sequence of events" (107) tied together by the plot, which consists of "the causation and links

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⁴ The same applies to stage drama: the event of two actors exchanging words in real time is itself a representation of the story event of two characters having a conversation.

between events" (ibid). Story is therefore the "what" of narration's "how," or as Chatman states it: "story is the content of the narrative expression" (23). Importantly, the same story can be narrated in different ways, as is the case for example in stage performance where the actors' presentation of the same events and dialogues will vary slightly between performances. Similarly, different stories can be narrated in very similar and partially identical ways, as shown very effectively in fanmade mash-ups of fictional works, where passages of a story's narrative are inserted into a different context whereby the story content of the passage is altered. Digital games as a procedural rather than static medium may do either or neither, altering story or narrative within each playthrough, or retelling the same story through the same narrative means everytime. It is important to note that the relationship between games and narrative is a diverse one and that even among the games that contain narrative, this narrative may have varying implementations and differing degrees of relevance to the playing experience.

In Half-Real, JesperJuul identifies two types of game structures: emergence games, where "a small number of rules [...] combine and yield large numbers of game variations" (5) and progression games, where "the player has to perform a predefined set of actions in order to complete the game" (ibid). Juul also remarks on these game structures' relation to narrative and story, stating that in progression games "we find most games with storytelling ambitions" (ibid) because of the degree of control the game designer has on the sequence of events. While I would not necessarily agree that the more tightly controlled sequence of events lead automatically to better preconditions for storytelling, most approaches to storytelling in digital games include at least some elements of a progressive structure. Juul himself mentions the adventure game as the archetypical progression game. Traditional adventure games feature a set, inflexible narrative, where the player can affect the way the sequence of events is presented in only a very limited way and the eventual outcome is completely predetermined. While this undoubtedly makes it easy to tell a specific story without having to take into account the player, other methods do work the player input into the narrative, sometimes also with elements of emergence structures and do nevertheless succeed in their storytelling ambitions. Role-playing games break up adventure games' strict structure by introducing a branching story in which the player can make different choices at set points, leading to different versions of the story. Other games, the Left 4 Dead series included, incorporate emergent gameplay into an otherwise loose, but consistent sequence of events. Games generally discussed in the context of emergent narrative tell no specific story, but rather provide a specific type of world with specific objects in which various stories may emerge

from the player's actions. As mentioned in the introduction, views on whether or not these different forms can all be defined as narrative diverge, but they all share the trait of offering a fictional environment in which fictional events take place.

The narrative strategies discussed in this chapter are primarily relevant to the approach to narrative adopted by my case study, that is, a loose narrative sequence filled with unpredictable, non-repeatable mini-events generated by emergent gameplay. They are nevertheless not specific to this particular attitude to game narrative and can also be found in different types of games with different general approaches toward narrative. However, a comprehensive overview of all forms of game narrative and the strategies employed to actualize them, is not what this chapter intends to accomplish.

3.1. Porting of Narrative Models

Juul refers to the history of digital games as being "both very brief and very long" (*Half-Real3*), part of the thousands of years old history of games, but at the same time the only fifty-year-old successor of "literature, cinema and television" (ibid). While games have been an integral part of our culture long before the invention of the computer and a sizeable part of digital games consists of modern implementations of old games – such as solitaire and poker, to name two particularly ubiquitous examples – in our current media landscape digital games are firmly positioned in the realm of new media. In this constellation, digital games are among the newest of expressive media, still continually developing their expressive potential both within their own form as well as in relation to other media.

In their story-telling ambitions, digital games have oriented themselves (and still do) very extensively towards their predecessors, literature and film. This orientation extends not only to story content in the form of adaptation or reference, but also includes the structural appropriation of narrative methods. Early text adventures, such as *Zork* (1980), can basically be seen as narrative fictions that require the player to enter commands to access the next part of the story – essentially a form of hypertext and often discussed in this context (see for example Lindley 18-21). The advancement of graphics in digital games during the past two decades has also led to the prevalence of the cutscene: a short, usually animated ⁵ film sequence that interrupts gameplay, generally in order to provide narrative exposition. Further, the development in game narratives has not just led to attempts of creating new, medium-specific forms of story-telling, but there has also been development and modification of forms

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⁵Cutscenes most often contain slightly more sophisticated versions of the graphics displayed during gameplay. However, sometimes they may employ a different style altogether and a few games – notably the Command & Conquer series (1995-present) – use live-action footage.

of media appropriation. Literary narration has seen a move away from a main mode of relaying story *around* the events taking place in the game towards increasing integration into the game world, largely due to the advancement in graphics. Cinematic narration has been modified in a number of ways, with the so-called quick-time event, a video sequence incorporating prompts by the player, as an often-used example. The purpose of this subchapter is to examine these instances of cross-media borrowing and their implementation, modification and development in digital games.

3.1.1. Remediation

A little more than a decade ago, Jay David Bolter and Richard Grusin extensively examined the interdependence of media, with a particular focus on new media, in their landmark work *Remediation*. From the Latin *remederi* ("to heal"), the term was chosen to reflect upon the ambition of a new medium to improve a previous one, such as photography as the apparent solution to the ideal of realism in painting (24-26). Remediation is the "representation of one medium in another" (45) and is presented by Bolter and Grusin as the key characteristic of digital media and a universal dynamic to all contemporary media:

Digital visual media can best be understood through the ways in which they honor, rival, and revise linear-perspective painting, photography, film, television, and print. No medium today, and certainly no single media event, seems to do its cultural work in isolation from other media, any more than it works in isolation from other social and economic forces. (15)

The acknowledgement that media do not exist isolated from one another is obvious, but at the same time easily forgotten considering the wealth of medium-specific research emerging from literary studies, film studies and game studies. However, that practices of remediation are particularly present in new media may not only stem from qualities inherent to the new media in question as Bolter and Grusin seem to suggest, but also from the simple fact of their newness: any new medium needs to define its territory in the already existent media landscape and define itself in relation to – that is by borrowing from, modifying and improving on – other media. While "older media refashion themselves to answer the challenges of new media" (15), their strengths and capabilities are already largely known and mapped out, so that their refashioning resembles adjustment more than charting out new territory as is the case for new media. I see Bolter's and Grusin's *Remediation* therefore much more as an examination of digital media, or any emerging medium, in a particular stage, rather than a guide to understanding digital media as such.

A similar view is held by Steven Holtzman, whom Bolter and Grusin take up for arguing, in their words, "that repurposing has played a role in the early development of new media but will be left behind when new media find their authentic aesthetic" (49) and conclude that he "misses the point" (ibid). I take issue with the idea that the only alternative to remediation as described by Bolter and Grusin is "a radical break with the past" (50) and I don't think that Holtzman argues for such. While Holtzman does state that "we need to transcend the old to discover completely new" (qtd. in Bolter and Grusin 49), he is right that "repurposing is a transitional step that allows us to get a secure footing on unfamiliar terrain" (ibid) and it is a flawed line of thinking that requires this transition to eschew all use of and reference to other media altogether. Rather than forcing a radical break and banishing old media as is Bolter's and Grusin's interpretation, I see this transition consisting of a naturalization of "foreign" elements in a way that incorporates them into the particular medium's own strengths or own "language[...] of expression" (ibid) to borrow Holtzman's term. Media will always incorporate traces of one another, but in doing so their end result as accessed by their user, reader or player develops from an auxiliary use of old media elements - resulting in a form of media patchwork - to the implementation of these elements into the respective medium's own structure. Bolter and Grusin are right to argue that all mediation is a form of remediation (55), but their account of the practices of remediation that new media employis nevertheless largely limited to practices of remediation during a new medium's incipient phase. While Bolter's and Grusin's work is highly useful for any medium that currently undergoes this stage, I do not want to adopt their view in equating the practices described with qualities inherent to new media.

Although digital games can draw on millennia of game making and playing, in relation to their function as expressive medium they still exist in this stage of extensively reworking and refashioning older media's expressive means while defining their own. The concept of remediation can be used here to gain a better understanding of these processes of refashioning, the relationship of digital games to other expressive media as well as the process from repurposing to naturalization.

According to Bolter and Grusin, remediation functions through the "double logic" (5) of immediacy – transparency of the medium– and hypermediacy – opacity of the medium. Transparency aims to make the medium disappear to enable seemingly direct access to its contents, while opacity creates an awareness of the mediated experience, causing the user to focus on the medium itself in addition to its content. Immediacy and hypermediacy are mutually dependent: apparent transparency creating a fascination with the medium and

hypermediacy reflecting a desire for immediacy, and they are seen by Bolter and Grusin as opposite manifestations of the desire to achieve the real:

Transparent digital applications seek to get to the real by bravely denying the fact of mediation; digital hypermedia seek the real by multiplying mediation so as to create a feeling of fullness, a satiety of experience, which can be taken as reality. (53)

The use of older media to support the story of a digital game also reflects digital games' – and their makers' – desire to achieve the real, defined as "an immediate (and therefore authentic) emotional response" (53). At face value, it seems counterproductive to achieve "real" narrative by simply inserting film clips or written stories *into* the game and thereby presenting a story within a game, rather than a story as part of the game. This could arguably be assumed to draw attention to the story as construct, but in the majority of cases without a conscious pursuit of the "satiety of experience" that Bolter and Grusin ascribe to hypermediate reality. However, this approach makes sense, when taking into account how much literary and especially cinematic narration epitomizes our contemporary understanding of narrative. Digital games strive to offer narrative that is understood and engaged with as such by their players. Co-opting the narration of cinema achieves immediate recognition of what the game tries to do as methods of cinematic storytelling are commonly equated with narrative. The more direct the allusion to cinema, the more it makes visible (and understandable) the game's narrative ambition at the same time that it makes the game's story more realistic by allowing the use of narrative strategies that are already codified and accepted as realistic. In this sense, the repurposing of literary and cinematic narrative conforms to Bolter's and Grusin's argument that hypermediacy and immediacy work as mutually dependent components in achieving the real, in this case authentic narrative.

Further, presenting narrative as a form of "narrative as seen in other media" is a practical solution to make sure that the narrative presented can be engaged with and to consequently gain legitimacy in terms of narrative ambition. Game designers already know that cinematic storytelling works, they know that audiences understand and accept its conventions and will immediately recognize this type of narrative as story. Bolter and Grusin claim that before a new medium is put into relation to other media "it would not be apparent that the device was a medium at all" (65). I argue that the same holds true for the somewhat smaller circle of narrative forms: new narrative forms need to set themselves in relation to the previously established in order for their narratives to be seen as such. Narrative potential is in

no way unique to *digital* games⁶, but it is digital games that made this potential explicit by making the connection to other narrative forms by means of incorporation on a large scale.

Bolter and Grusin lay out a spectrum of ways that media remediate one another that is dependent on the media's attitudes to one another. This spectrum neither consists of a chronological development as a medium runs through various phases of its establishment in the media landscape, nor are the various ways in any other way mutually exclusive, so that multiple ways of remediation may be at work at any one time in any one medium. Nevertheless, the approach that Bolter and Grusin directly associate with digital games is remediation as absorption, where the new medium "[tries] to absorb the older medium entirely, so that the discontinuities between the two are minimized" (47), arguing that this is the fashion in which "the genre of computer games like Myst or Doom remediates cinema" (ibid). While this approach does generally seem a more accurate description of digital games' practices of remediation than Bolter's and Grusin's other components of the spectrum, 7 it may still refer to any approach of incorporating a medium or aspects of it into another and as such is not terribly precise. A more promising observation can be found in a later part of the book analyzing the material and economic dimensions of remediation. Here, Bolter and Grusin distinguish between two kinds of repurposing: repurposing in terms of content, mostly described as cross-media marketing, and repurposing "in microeconomic terms as the refashioning of materials and practices" (68). In my view, this latter type of repurposing goes well beyond economic dimensions and reflects the form-finding process any new medium undergoes as also indicated by Bolter's and Grusin's following description of the repurposing practices of print:

Thus, Gutenberg and the first generation of printers borrowed the letterforms and layout from the manuscript and constructed the printed book as the "manuscript only better." They borrowed the materials too. [...] After winning their rather easy battle of remediation, printers in the late fifteenth and sixteenth centuries moved away from the manuscript model by simplifying letterforms and regularizing the layout. (69)

Bolter and Grusin do not dwell on this description of print's repurposing process, but I think that it is just this account that offers a way of looking at remediation practices of digital games. Print makers began establishing the form of print by wholesale incorporating as much of the old medium of the manuscript as the new medium allowed. After this implementation

⁷ These consist of remediation as representation (meaning digitization of analog media), translucent remediation (emphasizing the difference) and aggressive remediation (refashioning the old medium in a way that foregrounds discontinuities between the different media).

⁶Juul sees the distinction between digital and nonelectronic games precisely at this junction, arguing that while nonelectronic games are "mostly abstract," digital games have the feature of fictional worlds (1). This does not take into account that many board games, including classic examples like *Risk* (1957), do in fact portray fictional worlds and attempt to involve their players in them.

had been successful, they gradually began adjusting the old medium's practices to ones more appropriate to the new medium and partially even impossible in the old, thus undergoing a process of naturalization of old practices to new form. Instead of seeing the literary and cinematic elements and practices in digital games as foreign elements not strictly speaking part of the game as game, it might be worthwhile to consider them as elements in a process of naturalization. In the following, I plan to examine both the early ways that literary and cinematic narration has been incorporated into game narratives, as well as various gestures made towards the process of naturalization. While it is impossible to say how far along digital games are in this process before it is finished, I aim to at least provide an overview of what is already there.

3.1.2. Literary Narration: Text in Games

Methods of literary narration were among the earliest narrative strategies employed when game makers first consciously attempted to tell stories. In 1975 Will Crowther called the adventure genre into existence with the creation of *Adventure*, a game (and subsequently a whole genre), whose entire expressive output took the form of literary fiction. *Adventure* begins with a simple description of scenery, maintaining this style throughout the game:

You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.

The game, setting the style for the text-based adventure games to follow, addresses the player in second person and requires them to enter the (right) textual commands to proceed with its scripted narrative. *Adventure* reacts to the player's commands (right or wrong) as far as they have been anticipated by the writer, describing a new scenery each time the player moves (usually by typing cardinal directions) and responding to actions with short statements: the command "take lamp" is responded to with a simple "Taken," and the incorrect solution "eat lamp" with the statement "That's plainly inedible." *Adventure* and its successors implement the player into a pre-written literary story, more flexible than conventional literary narratives and employing a different mode of access requiring "non-trivial effort" (Aarseth *Cybertext* 1). Yetthey still develop their narrative only in certain pre-set ways that employ largely the same conventions as literary fiction. Text-based adventure games constitute a somewhat extreme example of early game narratives in so far that they are more accurately described as literary fictions with game elements than as games with elements of literary fiction.

Adventure games were by no means the only genre employing textual narrative, even in the 70s. Other games, such as *Star Trek* (1971)⁸ use literary narrative primarily as exposition and in order to supply an otherwise fairly abstract game with a fictional context:

It is stardate 2000. The Federation is being attacked by a deadly Klingon invasion force. As captain of the United Starship U.S.S. Enterprise, it is your mission to seek out and destroy this invasion force of 2 battle cruisers. You have an initial allotment of 7 stardates to complete your mission. As you proceed you may be given more time. [...]

This textual opener from *Star Trek* fulfills the dual function of giving narrative exposition in a style that, apart from the use of the second person, uses the conventions of literary fiction at the same time that it gives the player information related to the playing of the game. It states the goal (destroy two enemies) as well as information about the rules (you have a time frame of seven moves). Even though this piece of game narrative can by no definition of the word be called interactive, it is more than simple integration of literary narrative as it attempts to fuse literary narrative with game manual, resulting in a hybrid that, while entirely literary, is also a game narrative.

Not all of these expositional texts double as instructions to their respective games. In many cases their primary function consists of giving context to and providing a narrative frame for gameplay. Later games, such as *Warcraft* (1994) provide passages of text advancing the game's story between every level, despite little need to elaborate the following level's goal, in the case of *Warcraft* usually consisting of "destroy the enemy base." With the technological advancement of the past two decades, the reliance on literary narration to handle exposition and the more complex descriptive elements of a narrative has decreased almost to non-existence, being shifted instead to cinematic modes of narration.

Another initial use of text in games is dialogue, especially crucial in role-playing games, where the player's dialogue options correspond directly to the particular path the game's branching story takes, but pervasive throughout all genres. In its most common form, game dialogue is superimposed onto the rest of the game content displayed on screen, usually also setting up a separate interface, overriding the game's usual controls until the dialogue has been ended either automatically or by the player's indication of having read the content by pressing a button. While this method makes sense in so far that it relays informational content

⁸Star Trek is a text-based computer game, but cannot be classified as an adventure. The gameplay consists of navigating on a grid, locating enemy forces and shooting them, while keeping track of one's own resources.

⁹Games for hand-held devices resist this development more fiercely than the majority due to their technical limitations. Even here however, the trend for expository literary narration is in decline, with a few notable exceptions, such as the particularly lengthy mood-setting intro-text (although accompanied by still-frame images) to *Might & Magic: Clash of Heroes* (2009) released for the Nintendo DS.

and also accounts for players' different reading speeds, this design of literary narration as a separate interface removes the dialogue both visually as well as in the player's interaction with it from the rest of their gaming experience. At the same time, textual dialogue in games, similar to the uses of exposition, is often more than its literary counterpart simply transplanted onto the game and also here we can find forms of hybridization of fiction and instruction. Early on in *The Legend of Zelda: Link's Awakening* (1993), the titular hero Link comes across two children playing, who, upon being engaged, clue Link/the player into basic functions of the game:

Child 1: Hey, man! When you want to save just push all the Buttons at once! Uhh... Don't ask me what that means, I'm just a kid!

Child 2: Well, it seems that after you save, you will start at the last door you went through... I'm not really sure why that is 'cause I'm just a kid!

The literary narration of this scene fulfills the dual purpose of being both fiction and teaching the player how to play the game. Moreover, the instructional part of this message is inseparable from the fiction and posited as a diegetic part of the game world (although the participants in this conversation do not understand the meaning of their own words) and thereby allows the game to instruct the player without removing them from the game world.

In the above examples, text functions as an integral part of the game in relation to fiction as well as beyond and often fusing the classic style of literary narratives with the instructional style of a game manual. Despite its multiple functions, text as a game element in these instances still remains removed, visually and haptically, from the rest of the game. This use of text in a different medium is in several ways similar to the use of titles in silent film.

Even though the title cards, bearing dialogue, context or explanation for a scene evolved into "an integral part of the silent film" (Everson 128) and were even at their best "incorporated into the actual structure of the film, contributing to its pace and its rhythm" (ibid), they were still elements outside of or superimposed onto the fictional universe of the film and visually set apart from its other contents. Perhaps expectedly, the original function of the titles was not so much that of a structurally vital component, but rather an auxiliary device to smooth away the shortcomings of cinematic technology and narration:

The title, in the pre-1906 period, had been both a necessary informational device and a useful "out" for "directors" who were really that in name only. The titles told the audience what was happening, usually before it happened [...]. They also served to explain what had happened in an inexplicable long shot, which *should* have been broken up into medium and close shots, but rarely was. Moreover, they bridged jumps in location or time lapses before such photographic devices as the dissolve or the fade came into common usage. (Everson 129)

Like the titles, text in digital games in the instances discussed above tells the audience what is happening, especially were events cannot be depicted with sufficient unambiguity or cannot be depicted at all, often due to graphical limitations or those imposed by the game's perspective. Both this type of game text as well as titles cut *away* from the action and thereby suspend it until the necessary information has been transmitted. With these parallels in mind, it is not surprising, that with technological advances these instances of game text mirrored the development of silent film's titles: both largely gave way to sound, a method that had the advantage of being able to more seamlessly integrate into the fictional world on screen or at least run parallel to it. However, in both media this type of textual narration still survives in the form of (often optional) subtitles, where their disruptive element has been done away with, or at least been alleviated.

With the burden of exposition, dialogue and a large part of essential narrative information taken over by audiovisual modes of narration, game text became not only rarer, but also available to different methods of implementation into game narrative. Most importantly, game text made a leap from descriptive framing text to a diegetic element, one that was part of the game world. These texts take the form of books, databases or emails and mission briefs sent to the player character's own communication device. They can be accessed by the player repeatedly and by their own choice and they usually appear in contexts, where textual content can be expected both by the standards of the fictional world represented as well as by the player's own experiences with mediation.

Bioware's *Mass Effect* series (2008-2012), a science fiction RPG trilogy, contains extensive amounts of textual content. Beyond the use of subtitles for character speech and pre-written response options, the games' textual content includes in-world versions of various digital text formats. For one, there is the *codex*, a form of digital encyclopedia filled with background knowledge about the series' universe. Even though the codex is accessed via the game menu and therefore within a context that includes definite non-game-world elements such as the exit, save and load buttons, both its visual and its textual style are consistent with other diegetic elements of the game world. In the games' fictional context, it appears to be part of the databanks of player character Commander Shepard's personal interface. It is updated throughout the game, briefing Shepard (and the player) about the races, groups and weapons she encounters. Because it is accessed entirely by the player's choice, it is not perceived as an interruption of other game elements and most likely used during Shepard's "downtime" on her spaceship between missions. Another very similar use of text in the series is Shepard's personal messages that, unlike the codex, can be accessed through terminals on

the ship. In addition to maintaining the terminal interface, these personal messages establish their authenticity by calling on the player's familiarity with electronic messages, setting up the messaging system in the game universe as a form of emails in space, complete with spam mail:



figure 1: spam in space in Mass Effect 2

The spam mail, in the midst of mission briefs and notes of thanks for missions completed, mark the message files of the *Mass Effect* games as more than the player's quest log, namely Shepard's actual email account that does not only consist of the bare skeleton of plot-relevant information. The email messages, as well as the codex are seen as realistic because they tap into the player's experience with similar technology, achieving an experience of immediacy. Thereby, the game hides the fact, that these forms of text are still just as removed from the rest of the gameplay as the more traditional uses of text. Despite their game-world conform appearance, codex and messages still exist in their own menus with their own style of navigation and suspend the game's usual third person perspective. The player however is still unlikely to become aware of this in a way that threatens the continued suspension of disbelief because the game mirrors the experience of reading emails and navigating an encyclopedia. This is how checking on your emails is *supposed* to look like, making this in-game interaction with text feel natural and drawing attention away from the fact, that Shepard's body has suddenly disappeared. Because this use of text taps into our familiarity with other forms of digital text in addition to identifying itself as part of the game world, it is felt as a smoother, more integrated part of game narrative.

Even though this refashioning of other digital text-based media still results in a suspension of the elements of the game that make it a game, it should not be reduced to a mere intermediary method that is to be abandoned during the course of technological

refinement. This form of game text is a response to the real need to enable in-depth development of both story and game world without overwhelming the player.

A similar representation of textual media in a visual medium can be found in film, albeit here of the analog kind. The spinning newspaper is an artifact of film history, appearing in such classics as Citizen Kane (1941) and surviving until today, although now mostly an allusion to these earlier films. Like the codex and personal messages of Mass Effect, the spinning newspaper, informing the viewer of decisive events in the film, is a diegetic artifact of the fictional world, but still presented in a fashion that removes it from this world. The newspaper spins freely through space or stacks itself, one atop the other, existing in its own space rather than sharing that of any other character or artifact within the film. Yet, it functions as a stand-in for other alike artifacts and depicts something that really happened in and with real repercussions for that universe. The viewers' familiarity with the newspaper allows them to comprehend its content immediately as a now openly known fact within the film world, mirroring the effect of an actual newspaper in their own environment. Because of its double function of giving information about a fact (or rumor) at the same time as making a statement about its circulation, the newspaper device has never fallen out of use, although many modern films opt to implement it into the mise-en-scène of the film, showing it on a printing press early in the morning or in a character's hand.

This implementation of a textual artifact into the environment, without its text opening in a separate menu, is also beginning to become more prevalent in digital games. In these instances, text may appear in the form of flyers, posters, computer screens or writing on the wall that appear as mostly non-interactive objects in the game environment. Non-interactive in this case means that the player can not open these objects to access the text in a menu, but that the player's access to the text is limited to their observation of the object as it appears in the game space. The player may still in some cases pick up or destroy the object, but its text exists solely as a texture in the game world, making it entirely diegetic but at the same time easy to overlook. Because the attentiveness of the player to this use of text cannot be guaranteed or even expected, as this requires a kind of game literacy that is still emerging, it tends to be limited to short fragments that usually carry no absolutely essential information for the game story as for example in *BioShock* (2007) and, depending on the definition of essential, also in *Left 4 Dead* and *Left 4 Dead* 2.

3.1.3. Cinematic Narration: Cutscenes and Beyond

With the exception of the early adventure game genre and the odd experimental game, digital games rely heavily on the visual design of their game worlds and the elements within them. Even the adventure game genre began to implement graphics already in 1980 with On-Line Systems' (later Sierra On-Line) *Mystery House* and by the 1990's, the graphic adventure game, produced en masse by companies such as Sierra On-Line and LucasArts, had all but replaced its text-based predecessor. JesperJuul sees graphics as "probably the most important way in which games project worlds" (*Half-Real*134), and while they cannot be judged entirely on their own merits, their use for storytelling purposes is notable regardless of game genre or visual style.

In their graphical representation digital games remediate other visual media. Their visual style may resemble painting – for example the Japanese $\bar{O}kami$ (2006) – cartoons – with styles ranging from Anime, particularly present in Japanese Role-Playing Games, to the French style of animation invoked in the *Professor Layton* series (2007-2012) – or the photorealism of photography and movies attempted in most games using first or third person perspective. Especially in regard to depicting movement and supporting narrative with moving images, digital games tend to remediate cinema and often very closely at that. Bob Rehak in his 2003 article "Playing at Being: Psychoanalysis and the Avatar" sees this remediation at play particularly in "certain movie genres – science fiction, action and horror" (104), although this may simply be a result of the popularity of these genres in digital games. He lists several areas in which the remediation of cinema becomes apparent:

[...] the registers of thematics (similar storylines and dramatic exigencies), aesthetics (lighting, camera angles, and conventions of mise-en-scène, as well as the use of narrative space and nondiegetic music), and visual traces of the cinematic apparatus itself (the simulation of lens flares and motion blur, for example). (104)

These remediations are integrated into the overall structure of a game to varying degrees even within a single game, oscillating between privileging the cinematic experience and treating it as an element secondary to gameplay. In general, it is possible to distinguish between remediations of cinema, where the "camera" or the content of the screen is still in control of the player, signaling player agency within the cinematic environment, and those where cinema "takes over," using its control of the camera to generate meaning with traditional cinematic techniques. It is precisely at this point that cinematic narration and digital games clash, for as much as cinema relies on its control of the camera and the events in front of it, as much does the game rely on the player's input and their ability to affect what appears on the

screen. Camera control ¹⁰ threatens to disrupt the game's purpose – its playability – and thereby also makes these remediations particularly visible whereas others become naturalized and subsumed into the game and are in consequence overlooked more easily.

Among the most prevalent uses of cinematic narrations relying on camera control is the cutscene, "a non-interactive sequence of a game that typically provides backstory or informs the player of the task to be undertaken" (Juul, *Half-Real* 135). As a narrative element commanding complete camera control, Juul naturally describes cutscenes as "problematic" (ibid) for the reason that they "prevent the player from doing anything and are in a sense a non-game element in a game" (ibid). Ip also notes that cutscenes "are often criticized as being a passive mode of narrative, which in some cases can disrupt and antagonize the interactive experience" (108). Despite the clash between cinema and game thus always remaining in the foreground of discussion, both also note this narrative method's "necessity" (Ip 108) and "important role in projecting fiction in modern video games" (Juul, *Half-Real* 135).

Cutscenes can be used to relay a high quantity of story-related information in a precise way and allow game writers to fall back on well-established modes of narration. Perhaps most importantly, like the titles of silent film, they can be "a useful out" (Everson 129) for depicting something that is not implemented in the game mechanics. These events can consist of spectacular explosions or falls, but they can also consist of something mundane, such as the ability to jump, not implemented at all into the first installment of Mass Effect and therefore shown as a cutscene during the game's end battle. Secondly, they can be used to make an event appear more impressive or simply better structured, ensuring player access to important information. For example, by displaying a character's monologue in a cutscene, the event can be made more dramatic by switching between long, close and medium shots at appropriate moments and employing different camera angles, such as a low angle to make a villain seem more menacing. According to Rune Klevjer cutscenes "create a characteristic rhythm in which the regular interruption/release is always expected" ("In Defence..."). Cutscenes therefore function as a tool to relieve the tension of gameplay and to allow the players to focus their attention on the narrative development taking place. While games like Half-Life (1998) demonstrate that character monologues and other events equally high in informative content can also take place within gameplay, this method carries the risk of these events appearing dull without the cinematic conventions we have become accustomed to in visual media. Even worse, the player could be focusing on something else and thereby miss the

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¹⁰Camera control in the sense I use it here entails a sequence of several images/shots, whose content and style is predetermined and cannot be changed by the player. It does not include the use of a camera anchored to a particular perspective, such as in third person games.

event in question altogether. This is why game designers, facing the choice of either depriving the player of their agency or risking destroying a scene's significance, will often choose the cutscene despite the possibility of a representation in gameplay. The cutscene can be used as a safe and determined point in an otherwise mostly unstructured and arbitrary game narrative, in extreme cases stringing the core narrative along frequent cutscene intermissions with everything transpiring during actual play as merely tangential to it. While the use of cutscenes has definite advantages, it nevertheless seems to be used foremost as a crutch, where new techniques of storytelling that incorporate player control of the camera have not yet been developed.

In order to alleviate the problems caused in regard to player agency, several attempts have been made to reintroduce some degree of interactivity into cutscenes or to somehow couple player action with camera control. Ip mentions as one alternative "the use of more elaborate, interactive cut scenes [sic] [...] where the player might be offered a choice before, after, or during a cut scene to determine what happens next" (109). In Mass Effect 2, the player may click the right mouse button when the outline of a computer mouse appears flashing on screen (in the PC version) at certain moments during cut scenes and dialogues with non-player characters. As a result, player character Shepard performs a sudden action, such as stopping a young, inexperienced man from joining a mercenary force or aggressively responding to a sexist remark. Because a player never knows in advance when such a moment will occur, they will more attentively follow these scenes, ready to click the button and therefore feeling less removed from the game. These so-called quick time events (or QTE) can also take on more elaborate forms, involving pressing a variety of buttons in the right sequence within specific intervals and appear in various contexts, one of the more unconventional being a sex scene in God of War 3, where the player character Kratos' performance depends on the player successfully completing the QTEs. Ubisoft's Assassin's Creed series (2007-2011) somewhat inverts that principle byimplementing cinematic sequences into regular gameplay to accompany simultaneous player actions, rather than requiring brief player actions to accompany a cinematic sequence. In the series, the assassin player character often moves in ways not directly corresponding to the player input – although triggered by it – with the camera automatically swooping in and out the heart of the action and "filming" the movement sequence from a suitably impressive angle. Even though the game assumes control of the camera during these sequences, the camera movement follows through with an action the player initiated – whether it is the assassin pulling himself over a ledge or skewering an opponent. Thereby it retains the player's sense of agency more thoroughly than a QTE that generally first initiates an event and then allows the player a modicum of influence on it. Further, these instances of camera control also feel less removed from the rest of the game than a QTE does. While the QTE features interactions that differ noticeably from standard gameplay – even the comparatively brief QTEs that are often integrated into *Mass Effect 2*'s dialogue trees feature the flashing mouse prompt that doesn't appear elsewhere in the game – *Assassin's Creed*'s cinematic sequences run alongside standard gameplay and can be seen as a somewhat more elaborate visual representation of player actions. What the *Assassin's Creed* series shows, is that even though the cinematic concept of camera control clashes with some of the fundamental properties of digital games and is therefore understandably bemoaned as "passive" (Ip 108), it can nevertheless at least in limited form coexist with active gameplay with game narration and the player alternating in taking control of the camera.

Remediations of cinema that do not depend on camera control are a somewhat more diffuse area, as they permeate through and influence the entirety of a game's audiovisual content. This may include the choice of visual style mentioned above as well as the use of lighting, color and anon-diegetic soundtrack to evoke certain moods or certain visual styles like grayscale, film grain or sepia. Games may also employ certain established film conventions like flashbacks, heavily used for example in Heavy Rain (2010), or dream sequences/hallucinations as for example in Batman: Arkham Asylum (2009). The use of these remediations and the extent to which they mirror their counterparts in film differs from game to game. The use of a soundtrack in the style of cinema is ubiquitous in modern non-abstract games, ¹² while the use of set-appropriate lighting is comparatively rarer. The degree to which game soundtracks approximate film also differs noticeably, with some drawing on the briefer history of game soundtracks themselves, often using so-called chiptune or 8-bit music, while others adopt the style of their respective genre in film (particularly horror and action). Some games, including the Left 4 Dead series, intentionally aim for a cinematic feel in their implementation of sound and image. Valve software engineer Jason Mitchell describes Left 4 Dead as an "action movie" (35) to be experienced with friends. In other games the borrowing from film may be in part coincidental as both audio and visual content have become core components of video games; when confronting the question of how to design these components, other aural or visual media immediately suggest themselves.Remediations of

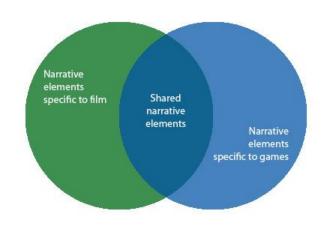
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¹¹It should be noted here, that this cinematic representation of player actions does not replace other forms of camera control in game narrative. All titles in the series still also feature conventional cutscenes.

¹² Abstract games also generally contain game music, but its function is limited to simple background music, although it may speed up as tension increases as in *Tetris*.

cinema in digital games are at least in some aspects unavoidable, because games and cinema share some of their narrative constituents, namely sound and (moving) image. Nevertheless, the attempt of a complete recreation of cinematic narrative in a game will likely be experienced as a "non-game element" (Juul, Half-Real 135), because games are not simply "cinema and then some," but rather both cinema and games have narrative constituents not entirely compatible with the other medium. In a way, game and film narratives constitute a

classic Venn diagram: an area of overlap in two otherwise separate circles. In this area of overlap, cinematic remediation should not be confused with immaturity of the game narrative in the same way that the continued use of paper and letters in print, a remediation of the manuscript, is not a sign of the immaturity or incompleteness of print as medium. Games may still consciously and overtly reference cinema or even a specific film figure 2: a Venn diagram, depicting the overlap of film and game



narratives

the phenomenon of camera control, lighting resembling horror film conventions in a game could hardly be referred to as a non-game element.

3.2. An Overview of Narrative in Play

in their audiovisual content, but unlike

Having thus established that part of a game narrative will quite naturally consist of audiovisual elements already known from and functioning in a similar way as in other narrative media, the following chapter's intention is to look at the part of the game narrative circle outside of the overlap between film and games. The specific ways in which games relay narrative are still being developed and researched and may therefore quite often appear within games as half-baked, somewhat inconsequential ideas or be used without any intentional designs on their narrative potential. However, in many games with a strong focus on storytelling, game structures and spaces are already more carefully designed with their narrative significance in mind. Game narratives like Half-Life or Left 4 Dead require the active participation and attentiveness of the player to make sense of the narrative. In these games, in order to assess the narrative in its entirety, the player must examine their environment and reflect on their avatar's and their own actions as well as the way that the game system structures these actions. Even in games where the bulk of narrative weight is carried by cutscenes or other audiovisual modes of narrative, game elements nevertheless have an influence on the game's narrative. Battles, however peripheral, are narrative events and even where the opponent's death or defeat is depicted in a cutscene as for example in Mass Effect, the fight itself still takes place in gameplay, determined by the game's rules and mechanics and the player's use of available actions. Whether or not a post-fight cutscene makes note of it, the difficulty the player has to win the fight has a narrative impact and can make the difference of marking the player character as a supreme fighter or the overwhelmed commander of a spaceship. In Professor Layton and the Curious Village (2008), the main game mechanic of solving puzzles is only flimsily integrated into the game's core narrative. Nevertheless, the act of puzzle solving is a narrative event as it represents an interaction with a villager and marks Professor Layton as an intelligent person with analytical capabilities. Whether intentionally used or not, game elements always have a narrative dimension as long as the game as a whole does. In the following, I will examine the existing theory on some of the more prominent narrative constituents unique to games: the intersection of game rules, mechanics and player agency, the game space and processes as units of meaning.

3.2.1. Emergent/Experiential Narrative

The term emergent narrative, similar to the concept of narrative used in game studies, is somewhat diffuse and may refer to different game narratives or parts of them depending on who uses it and in what context. In Half-Real, Juul expresses this confusion, stating that "emergent narrative tends to be described very loosely as the player's experience of the game [...] or the stories that the players can tell about the game, or, perhaps, the stories that players can create" (159) and coming to the conclusion that it is "a nearly meaningless term" (ibid). Jenkins describes emergent narratives as "not pre-structured or pre-programmed, taking shape through the game play [sic]," relating them entirely to open-world and thereby also open-story games like The Sims (2000) that do not come to any specific conclusions or attempt to make anything other than broad, thematic statements that are not rooted in a specific story. For Jenkins, whose focus in game narratives is game space, emergent narratives create a type of play space that makes the creation of certain, thematically determined stories possible, rather than that they constitute a way of telling a certain story. While the scenarios Jenkins describes are certainly emergent narratives in the sense that a story is told in a way that is not predetermined, but emerges from elements within the game, I argue that this emergent storytelling is not limited to game narratives where no predetermined stories and plots are present. In describing open-world games like The Sims, I would adapt Craig Lindley's distinction between "branching narrative," "branching plot structure" and "branching story" (7) and define *The Sims* as an emergent story, rather than an emergent narrative. Lindley distinguishes to which extent certain game narratives employ branching, or the selection of a game fiction's elements from predetermined choices. Whereas a branching narrative "provides interactive selection of narrated elements conveying particular plot elements in particular ways" (ibid), a branching story goes beyond this and offers "interactive selection/determination of a representation of specific set of events, characters and settings constituting a story" (ibid). Similarly, emergent narrative should be more aptly used to describe narration emerging during a gameplay that includes and relays "particular plot elements" that in turn are part of a particular story, while the emergence of entire stories – plot, narrative and all - emerging from playing a game like The Sims could be instead classified as an emerging story. What this distinction allows is a differentiation of the degree of non-determinedness in a game narrative and a better assessment of how and to which extent the game fiction is open to player influence or chance. Of Juul's three options above, my understanding of emergent narrative would thus be closest to "the player's experience of the game," which is however not to be confused with the player's *subjective* experience of the game. While interpretation can hardly be excluded entirely, the issue at hand in emergent narrative is the experience the game offers to the player, or the way the plot elements of the story are presented and how this presentation is generated dynamically during gameplay.

Gordon Calleja stresses the link between emergent narrative and experience by opting for the term experiential narrative to describe the same phenomenon. At the same time he cautions against "collapsing all forms of experience related to the game as narrative" (2). The conflation of emergent or experiential narrative and playing experience in general is understandable as emergent narrative becomes part of the larger playing experience and is hard to pin down to its specifics because it tends to be non-repeatable and takes place during instances where the player's attention is divided between following the story and mastering gameplay. As a result, the narrative that emerges from these gameplay instances may easily be processed as part of the player's emotional response to the events on the screen rather than something that actually takes place in the game with the player's involvement. However, as Calleja and others have argued it is crucial to the understanding of emergent or experiential narrative that it is rooted in and part of the game:

Althoughexperiential, or emergent, as it has sometimes been called, narrative is strongly related to the cognitive faculties of theplayer, it does not mean that it exists in the mind of theplayer without relation to the properties of the artefact that engendered

it. Quite the contrary, as Iser has argued in the context of the reading process, the experiential dimension of game narrative is rooted in the (cyber) textual properties of the text at hand. (Calleja 2)

More so, even though the player acts in these instances, contributing to their own unique experience of the game, they nevertheless act in the confines of the game system, creating narratives and experiences anticipated and to a degree planned into the game and game narrative as a whole. While the player relationship to the game fiction is often discussed as co-authorship (see Lindley or Pearce), it would be no less appropriate to describe the player as a tool that is used by the game fiction and directed to achieve various possible narratives leading to a successful conclusion to the game's story. That is not to say that the player is entirely on the rails from beginning to end of the game, but neither are they given significant authorial control that would allow them to deviate too much from the path the game narrative is proceeding along.

The role of the player in emergent narrative can be understood as giving shape to the events in the game or actualizing them. Depending on how much of the game's story is predetermined, the player may encounter an event every time they play through a passage, or an event may be the result of player response to a previous event or randomly generated by the game system. In any case, the event requires player actions to manifest itself and at least part of its narrative significance derives from the specific actions the player performs. For example, if a player only barely overcomes an enemy in Half-Life, leaving player character Gordon Freeman nearly dead, and then finds a first-aid station in the next room, the narrative effect is quite different than if the player had completed the same challenge with relative ease. In each case, the same rough sequence of actions takes place: the player destroys the enemy, walks into the next room and healsup at the station. The difference in health remaining after the battle has very little influence on the way the game proceeds as the player gets the chance to heal up, but the narrative created differs significantly. Similarly, the way the player defeats the enemy also constitutes elements of emergent narrative as there are a multitude of different hits and misses, intervals of attack moves, choices of weapon and angles of attack that can make Gordon Freeman appear differently skilled, frenzied, cowardly or desperate.

Emergent narrative elements like these are present in nearly every game with a fictional dimension. Even a narrative as fixed as the modern graphical adventure game allows for limited narrative differences dependent on player actions. Even though adventure games typically only allow the player to perform very specific actions in a mostly predetermined order, they generally always give the player the option to wander around aimlessly. In the

Monkey Island (1990-2009) series for instance, this can have the effect of making player character GuybrushThreepwood, albeit always depicted as a bit of a fool, appear either as a resourceful person, quickly striding into action or as a confused individual out of his depth, wandering back and forth through the same spaces. What these examples illustrate, is that emergent narrative, far from being an experimental or novel approach to game narratives, is present even in the most restrictive and predetermined of game narratives, altering the unique way the game's story is told in however subtle ways.

3.2.2. Narrative Architecture

Game space appears as a core component in many considerations on game narratives. For Jenkins as well as Aarseth is the crucial component and especially for Aarseth it eclipses all other modes of representation:

More than time (which in most games can be stopped), more than actions, events and goals (which are tediously similar from game to game), and unquestionably more than characterization (which is usually nonexistent) the games celebrate and explore spatial representation as their central motif and *raison d'être*. (Aarseth "Allegories" 161)

Even for Juul, who remains critical of the claim that games have narratives, defines representational digital games as "a set of rules as well as a fictional world" (*Half-Real* 1), the use of the word "world" foregrounding the role of space in the game fiction. World-building is a necessary task in any type of fiction: prose requires its writer to describe the environment the characters exist in; film and television usually require entire teams to create sets and construct a mise-en-scène that impresses the viewers as a believable space. In fact, the quality of a work of fiction is often described in terms of how convincing the depicted space is. An engagingly written book sucks the reader into its pages, that is through them and into the space the fiction takes place in. Well-made films give the viewer the impression that what appears on screen are real places that they too could visit, even when on another level they know that this is not the case. For instance, according to Ken Adam, the production designer of Kubrick's *Doctor Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964), Ronald Reagan, upon becoming president, asked to see the iconic "war room" depicted in the film, assuming that it actually existed (Monahan). Taking this into consideration, the role of game space in game fictions is hardly surprising.

What differentiates game space from space in other fictions and in some respect also makes the creation of a believable game space more challenging is that this is a navigable space, whose exploration is not only possible, but usually mandatory for a successful completion of the game. Further, whereas for example film spaces may evoke the feeling of

being able to visit them, making the audience imagine what it is like to engage with them, game spaces offer a tactile experience asking their players to actually engage with them as they appear on screen, rather than to simply watch the environment pass by. Jenkins, in his description of what he calls environmental storytelling, contrasts the spatial story of digital games from that of the theme ride in amusement parks precisely at this tactile level:

The most significant difference is that amusement park designers count on visitors keeping their hands and arms in the car at all times and thus have a greater control in shaping our total experience, whereas game designers have to develop worlds where we can touch, grab, and fling things about at will.

This engagement with space is not just related to a desire to touch, but also a necessity. As players, our own representations, or avatars, as well as our objectives and fears (in the form of obstacles and enemies) are all located in the game space. As a result, we not only can but must "touch, grab and fling things about" to advance or even just to ensure our continued existence in the game space. Traversing space is part of the challenge of digital games and the nontrivial effort the player puts forth in order to traverse it may in turn alter the game space itself:

The inputs of a gamer are usually motivated by the necessity to movean object or avatar, and the space visible within the frame reconfigures accordingly. In this sense, a gamer's input creates space as a pathway is cleared from, say, encroaching zombies. (Wood 88-89)

As the player advances through and alters the game space, they also advance the game's story with each change made having some however minor narrative significance. A popular way of visualizing game events in game space in first person shooter (FPS) games is to mark the places of firefights with bloodstains, creating a permanent (or semi-permanent) reminder of the vanquished threat. This extends the player's reconfiguration of space from moving objects or removing enemy units (whose status as space is debatable 13) to altering the very texture of the space itself, creating a digital equivalent to the "[name] was here" type of graffiti. 14

Game spaces have several key functions that go beyond the use of spaces in other narrative media. Like in other media, space frames and structures the narrative and enables access to the objects and people in it, but game space adds a practical dimension to this as the player in a sense needs to physically access the space (via the controls). Game space then

¹⁴Many FPS games also have a much more direct equivalent of this: the ability for the player to "spray-paint" a customizable logo onto the texture of the environment.

¹³ The definition of enemy units as part of space seems to be somewhat unique to Wood. I tend to see enemies as further occupants of the space, rather than space itself, although this is also a question of game genre and enemy mobility. A stationary enemy unit, such as the piranha plants in the *Super Mario* games is a distinct enemy unit as well as part of the landscape. While mobile units, the preferred type of enemy in first and third person games, may block access to space, they are not truly part of it.

enables and requires the player to engage this space and in engaging it, reconfigure it. All representational game spaces rely at least to some degree on these steps of player activity to achieve a narrative result, but depending on genre and the particular game's narrative aim, they may do so in different ways and with differing outcomes. Jenkins identifies several ways digital games use game space for storytelling purposes:

Environmental storytelling creates the preconditions for an immersive narrative experience in at least one of four ways: spatial stories can evoke pre-existing narrative associations; they can provide a staging ground where narrative events are enacted; they may embed narrative information within their mise-en-scene; or they provide resources for emergent narratives.

Having already touched on Jenkins' last point in the previous chapter, I will now focus on the other three.

Jenkins' evocative spaces are primarily game adaptations of stories from other narrative media. Citing American McGee's Alice (2000), he argues that "McGee rewrites Alice's story, in large part, by redesigning Alice's spaces." Evocative spaces according to Jenkins recall other pre-existing narratives and exist in interrelation with them, contributing to what Jenkins calls "transmedia story-telling" in which games are just one node in a larger crossmedia narrative. The spatial function that Jenkins describes does not just apply to adaptations of specific stories, but can also be observed in the larger field of narrative genre, ¹⁵ and not just in relation to game spaces. Replicating or adapting spaces is a crucial strategy for evoking narrative genre in games as well as films and literature. Horror fictions are replete with minimally different descriptions and imagery of the same, but different haunted house and the same, but different graveyard. As with Jenkins' evocative spaces it is the familiarity with these spaces that create anticipation and let the audience know what to expect. The context of these spaces is immediately apparent to those more familiar with similar fictions. Consequently, digital games do not need to rely on specific media adaptations to create evocative spaces but may redesign spaces from other media or other games to identify themselves as a member of the same narrative genre and in this way relay genre-specific information much more efficiently. This also means that the vast majority of non-abstract digital games employ evocative spaces to some degree as they can largely be sorted into the same narrative genres as works of film and literature.

¹⁵The term genre is somewhat tricky in relation to digital games, because here it may mean one of two things (or both): narrative genre refers to the genre a game belongs to in a traditional sense, e.g. horror or science fiction; game genre, the more common application of "genre" when discussing games, describes the type of gameplay, e.g. adventure game or first person shooter.

Whereas evocative spaces still primarily rely on their audiovisual content and in fact tend to remediate the audiovisual content of the media products they evoke, Jenkins' second point, enacting stories, delves into space and its architecture as a structuring force in game narratives:

The organization of the plot becomes a matter of designing the geography of imaginary worlds, so that obstacles thwart and affordances facilitate the protagonist's forward movement towards resolution. Over the past several decades, game designers have become more and more adept at setting and varying the rhythm of game play through features of the game space.

Game space defines what the player can see, what they can touch and move, where they can go and how. Criticism levelled against the concept of narrative in games is that due to their interactive quality and the player's resulting influence, digital games present events in far too arbitrary a fashion to be understood as narrative (Juul "A Clash"). The structuring function of game space is one strong counterpoint to this argument. In game environments the player (usually) can't go anywhere but onward. Game space leads the player to where the action (and the story) is simply by giving them no other choice. In "Everything I Know About Game Design I Learned From Super Mario Bros." Patrick Curry describes how the game space of *Super Mario Bros*. informs the player on what to do without any explicit instructions simply by excluding other possibilities:

Walking to the left does nothing. Mario cannot interact with the hills or grass at all. But walking to the right reveals a bit more of this world. The screen smoothly scrolls as Mario walks to the right, and soon the first pieces of interactive architecture appear, as does another habitant of this world – a walking mushroom man, known as a "Goomba."

In thirty seconds of play, the player has discovered Super Mario Bros.' primary objective: move to the right. At an abstract level, this is all the player needs to know. (14-15)

Curry further refers to the player's task in the game as a "move to the right' quest" (15) and it is this constant advancement to the right that structures the narrative. The sequence of events can be planned and ordered simply by placing the corresponding objects and units from left to right into the game space and the player will have no choice but to encounter and resolve these challenges in consecutive order.

While many (younger) game genres have a more sophisticated pattern of player movement, in all cases game space restricts where the player can go and what they can interact with. First and third person games most commonly feature a three-dimensional game environment, where the player can attempt to go onward in any direction they choose, thus giving them the illusion of free movement. In the terms of Aarseth et al., these games are

usually geometrical, rather than topological spaces. Whereas topological spaces "[give] the player only discrete, non-overlapping positions to move between" (Aarseth et al. 50), geometrical spaces may allow the player to move "in all directions, with millions of alternative positions" (ibid.) However, even though the player's positions and movements are not limited to particular pre-defined spatial units, the player's paths are nevertheless guided by the architecture of the environment. The player cannot walk through solid walls or locked doors and often even thickly grown foliage presents too much resistance to move through. Many game spaces lead their players along a corridor from start point to finish line, sometimes obfuscated by some alternate paths or dead ends that can be explored, adding depth to the basic corridor layout. Other spaces take the shape of a large arena within whose limits players may move rather freely. A hybrid option is found in games like Borderlands (2009), where the player is successively given access to different linked arena-shaped environments. Arguably, the corridor layout yields more narrative control to the designer of the game space in terms of sequence and pacing, but any kind of game space exerts limitations. Eventually, when the player walks too long in a direction the game does not support, they run into a visible or invisible wall¹⁶ and are forced to return to their intended path, following and thereby also generating the game's intended narrative progression.

Jenkins' third point, embedded narrative, exists as a parallel to enacted stories. Embedded narratives take the shape of objects in or texture of the game space and point to a secondary narrative to that which the player is enacting, such as the game story's backstory:

[...] one can imagine the game designer as developing two kinds of narratives - one relatively unstructured and controlled by the player as they explore the game space and unlock its secrets; the other pre-structured but embedded within the mise-en-scene awaiting discovery. The game world becomes a kind of information space, a memory palace.

The extent to which narrative information is embedded into a game environment naturally varies widely. It can range from Carson's examples of "staged areas"— "doors that have been broken open, traces of a recent explosion, a crashed vehicle, a piano dropped from a great height..." (Carson, qtd. in Jenkins) — that offer a vague impression of previous events to artifacts with specific and unambiguous story-related information, such as written notes or personal belongings. The player accesses this embedded narrative while simultaneously

invisible wall is circumvented by having the player shot by an automated surveillance system whenever they get too close, but before they reach the borders of the game environment. Similarly, spaces that are only meant to be accessed later on in a game's story are often "policed" by high-level hostile units that kill the player character.

This wall often is, but does not always need to be a literal wall. Especially in RPGs it may also be a non-player character (NPC), telling the player character to turn back. In the open spaces of *Borderlands*, the problem of the

engaged in active play, or participating in an enacting narrative. According to Jenkins, many game narratives rely on the interplay of both:

Embedded narrative can and often does occur within contested spaces. We may have to battle our way past antagonists, navigate through mazes, or figure out how to pick locks in order to move through the narratively-impregnated mise-en-scene. Such a mixture of enacted and embedded narrative elements can allow for a balance between the flexibility of interactivity and the coherence of a pre-authored narrative.

In some cases, the focus of gameplay and thereby enacted narrative may be explicitly drawn towards information embedded in the game. Jenkins cites Myst (1993), but a game does not need to be entirely past-oriented to explicitly direct players to embedded narrative objects. Borderlands, whose story is predominantly set in the game's present-time, contains embedded narrative as a secondary layer of storytelling, rather than its main focus. In one quest players must retrieve audio logs recorded and subsequently lost by a non-player character in the game. Whenever a player retrieves a log, its recording is played, giving insight into the gradual deterioration of the character's mental state. While the content of the voice recording is essentially a flashback, as a voice recording it still exists in the game's present and allows players to simultaneously respond to the present-time events that drive the game fiction. Because the logs are not just embedded narrative, but also quest objects whose retrieval advances the game's enacted narrative, the player cannot overlook this information. Assigning objects in the game space this double significance can be used as a strategy to make sure the information is not missed. In other cases, game narratives may favor a more subtle approach by allowing, but not requiring the player to observe embedded narrative in passing. This approach is used in particular when narrative is not embedded in an object the player can use, but in the texture of the game space, such as blood stains on a wall. I would argue that this approach to embedded narrative is existent in nearly every fictional game space and while players may thus easily miss parts of the story on the first playthrough, this is no different to other fictions, where details may only become apparent after repeated viewings.

These narrative uses of space – evocative spaces, enacting stories and embedded narratives – are, consciously or not, part of every game fiction. As the player's access to the game fiction is achieved through their access to game space, this space is almost inadvertently imbued with meaning. However, as game designers' proficiency at spatial story design increases and players are becoming more and more adept at reading these spaces, game space becomes more purposefully used as a narrative component, resulting in more complex spatial narratives.

3.2.3. Processes as Tools for Meaning-Making

When Diane Carr speaks of representational elements in her analysis of the game *Baldur's Gate* (1998) in *Computer Games: Text, Narrative and Play*, she refers to the representational elements already known to us from other media – image, text and sound – and refers to other constituting elements of the game as ludic elements. It is true, that a large part of what a digital game means, especially in regard to its fictional dimension, is relayed through the elements Carr has labeled representational. This is one reason why abstract games that do largely not attempt to represent anything on an audiovisual level are much more open to interpretation than those with a detailed fictional world (see Murray's interpretation of *Tetris* referenced in the introduction). It is also perfectly natural, that in our interpretive efforts, we first latch on to elements also widely used in other media, but as I have argued before, this does not mean that no other means of representation exist or even that audiovisual elements are the most significant contributors to meaning and narrative. In his work *Persuasive Games*, Ian Bogost, far from concentrating on audiovisual means, argues that digital games' "core representational mode" (ix) is procedurality:

Procedural representation explains processes *with other processes*. Procedural representation is a form of symbolic expression that uses process rather than language. (9)

All games work with processes. A game's rules state a number of conditions and require the execution of specific actions whenever these conditions are met. In analog games, these processes are executed by the players, such as moving a player figure the indicated amount of spaces after rolling a die. In digital games they are invisibly carried out by the game and affect diverse aspects of the game, such as AI behavior, the actualizations of player behavior in the game and also "classic" modes of representation like graphics and sound. In Expressive Processing, Noah Wardrip-Fruin argues that "the move to media objects that carry out processes is a profound shift" (3), characterizing digital media as a different order to older media forms, which he refers to as "fixed media" (2). Both Bogost and Wardrip-Fruin focus their work on processes that mean something, that can be used for expressive purposes. Wardrip-Fruin concentrates primarily on digital literature and processes enabling linguistic expression, while Bogost's main focus are processes in digital games that can be used persuasively, to make an argument. With processes being "central to the creation of digital works" (Wardrip-Fruin 1) and operating on many different levels for many different purposes comes the need to distinguish between processes with expressive capabilities and those without them:

However, someprocesses carried out by digital works have a much more meaningful influence ontheir operations. [...] with lower intensity in their AI processes, games are no longer considered offer the same gameplay experience — whereas with lower graphical intensity thegameplay experience is considered the same. (Wardrip-Fruin14-15)

With the sizeable portion of non-expressive processes¹⁷ thus taken aside, it is important to distinguish between Wardrip-Fruin's and Bogost's different approaches to meaningful processes, both of which offer valuable input to the contribution of processes to narrative.

Wardrip-Fruin sees processes as meaningful in regard to their ability to represent and create primarily linguistic expression, a point which can also be extended to other expressive elements in fiction beyond the expressive content of words. According to him, a digital work's "most basic operations¹⁸ encompasses three elements: surface, data and process" (101-102). While data supplies the work with "text, graphics, sound files, tables of numbers, and other non-process elements" (9), it is the task of processes to "arrange data, maintain models, drive simulations, and so on" (10). In short, processes have a significant role in determining the shape of the output built from a work's data and without them, a coherent display of the data on the surface level would not be possible. Lastly, the surface "includes what is made available to the audience for interpretation (and interaction)" (ibid), which consists only of part of the components (both data and process) within the work.

Wardrip-Fruin's focus in understanding digital works is on "how they operate" (3), that is how processes work to create the coherent output eventually accessible on the surface level. Processes work in accordance with what Wardrip-Fruin calls operational logics (165). Logic is here being defined as "an element of a system, supported by an abstract process or lower-level logics, that is understood to embody an appropriate behavior of that system toward a particular end" (Wardrip-Fruin 169). In *Spacewar!* (1963), commonly regarded as the first video game, Wardrip-Fruin identifies two "basic logics" very common to digital games: gravity and collision detection (165). The logic of gravity specifies how objects in the game space behave and the particular logic of gravity implemented in a particular game specifies how (at which speed, with which trajectory) dropped, thrown or otherwise loose objects fall to the bottom, or whichever the center of gravity happens to be. The computation for each specific object in response to it becoming loose within the game space constitutes a process at work under this particular logic. Even such a basic logic as gravity has expressive

Expressive Processing contains a number of different versions of this basic model with different constituents added to the always included core terms surface, data and process

¹⁷ This includes processes, whose primary function it is to maintain the system or to enable the function of higher-level expressive processes.

and narrative implications on the work as a whole because it determines how objects in the game space behave. Altering the gravity in a game would significantly alter the conception of the game space. For example "low" gravity is often implemented in fictional game spaces like space stations or other low-mass bodies in space to represent the experience of being in space, thus fulfilling a narrative purpose: relaying information about the setting to the player as well as affecting the events transpiring in this low gravity space. While an analysis of the expressive function of every logic at work in a particular game hardly seems like a fruitful approach, it is important to understand that even comparatively basic logics contribute to a game's narrative and to be able to consider the way that some select (high-level) logics significantly impact the unique way a game's story is told.

In Expressive Processing's passages dealing with digital games, Wardrip-Fruin concentrates on the logics and processes that manage AI behavior, or more specifically the "graphical and linguistic behavior" (170) of non-player characters (NPCs) in Fable (2004). The high-level logics that produce and manage this behavior are identified by Wardrip-Fruin as "combat logics, story/quest logics, and world simulation logics" (ibid) and refer to different categories of (re)actions available to the NPCs depending on the type of engagement with the player. Whenever the player initiates combat, the NPCs operate according to combat logics, which specify possible reactions to a combat situation and disable the NPC's access to the other high-level logics. This prevents NPCs from for example offering a quest or making conversation while they are being attacked. Each high-level logic works with processes that select, arrange and display the data appropriate to the situation that is either computed in realtime or selected from data stored in the game, such as sound files and character animations. One of Wardrip-Fruin's examples of such a reaction is of a shopkeeper NPC in the game operating under story-logics and more precisely reacting to the event of theft. When the player character removes an item from the shop, a pre-specified animation (marked as "angry" (177)) is triggered for the NPC along with a randomly selected vocal response among several (Wardrip-Fruin quotes three) appropriate options. This creates a narrative event enacted in response to situation rather than structured by sequence. Each component of this event is authored – the possibility for theft is implemented, the angry animation created and the sound file recorded – but each of these components is individually built into a dynamic rather than a rigid, sequential narrative structure. The potential here is for a type of authoring that does not require the pre-arrangement of data, but specifies plot points (events) and narrative (the way the event plays out) for situations that may or must be triggered by the player.

While Wardrip-Fruin thus examines the fundamental question of how processes create expression, treating this ability as significant in itself, Bogost on the other hand sees the significance of processes in their ability to represent other processes and make them apparent to the player of a game during interaction. He refers to this concept as procedural representation and to its conscious use, following Murray (*Persuasive Games* 10), as procedural authorship:

Procedural representation depicts how something does, could, or should work: the way weunderstand a social or material practice to function. (58)

This means that not only is the audiovisual content of a digital game selected or created through procedural means, but that the process as process contributes to the construction of meaning in the game, whether in regard to a game fiction or the real-world relevance of the game (or both). As Wardrip-Fruin observes, "one of the primary design challenges [in digital games] lies in helping the audience understand certain processes" (45) and only this understanding enables the player "to take actions that seem appropriate for achieving a result" (45). The fact that digital games already rely on the player's successful comprehension of process in order to be playable makes them particularly well-suited to then use the player's ability to understand process not only to teach gameplay, but also to make accessible the game fiction through procedural means.

Bogost's aim in illuminating the expressive potential of processes is to give game developers like himself a tool to not only express something, but to persuade, to build an argument:

I call this new form *procedural rhetoric*, the art of persuasion through rule-based representations and interactions rather than the spoken word, writing, images, or moving pictures. (*Persuasive Games* ix)

While Bogost describes procedural rhetoric as a "subdomain of procedural authorship" (*Persuasive Games*29) primarily in the context of making real-world claims through games, I believe that it is also relevant in arguing and making apparent character motivations and themes of a fictional work within its own context beyond the simple statement of "how something does, could or should work" of procedural representation.

To illustrate this point, I offer an example of a game using procedural rhetoric for making both real-world and fictional world claims: the board game adaptation of Ken Follett's *World Without End* by the same name, designed by Michael Rieneck and Stefan Stadler. The game takes place in the setting of Follett's novel, the 14th century town of Kingsbridge and has players take up the role of nameless citizens of the town during the time

span of the novel (leading up to and including the Black Death pandemic). The goal of the game is to earn victory points mainly by contributing to the construction of important buildings in the town, although the players have numerous options to gain points, money or other resources through various actions. Beyond earning points, the players need to make sure that they collect wheat, piety and a varying amount of money (determined by a roll of the die) by the end of each round to satisfy the demands of king and church. If the players are not able to pay these tributes, they are punished with crippling penalties.

Half-way through the game, the Black Death begins to infect the town's inhabitants, giving the players the chance to cure them in exchange for victory points. Nearly all of the inhabitants further offer certain boons, including wheat, money and piety, in return for being cured. However, the game board also features an outlaw at the skirts of the town that has nothing to offer beyond the points given for curing him. Predictably, this outlaw is only cured on the rarest of gameplay occasions, because it simply makes no sense for the players to cure him rather than one of the citizens with more to offer. Thereby the game makes the real-world claim that people are more likely to act for their own benefit rather than selflessly, illustrating that to the players by their own behavior.

But the game also makes several claims about the fictional world the players act in and the high-pressure situation the town's citizens are in. Despite the game's goal of amassing the most points, during play this concern by necessity winds up secondary to insuring one's survival in the game by avoiding penalties from king and church. The collection of wheat, piety and enough money takes up the bulk of each round's actions. This makes a point about the fictional setting of the game, where citizens dream to achieve something, but find themselves largely fighting for their own survival at the mercy of those in power. It also gives new context to the plague-stricken outlaw, because the scramble for resources leads to a situation where player-citizens don't have time or resources to dedicate to taking care of those that cannot take care of them in return. In this way, the processes of gameplay make the players act "in character" of the citizens they embody, giving them an insight into the citizens' motivations and actions as well as their fictional environment by way of first-person demonstration.

4. The Horror Genre¹⁹

As the example of the previous chapter illustrates, the reading of processes, even more so than that of audiovisual material or text is highly dependent on the contextual framework it exists in. Without taking the fictional setting of the *World Without End* board game into account, it is not possible to understand its processes of play as a representation of the social configurations of medieval England as represented in the source material for the game. Similarly, it is highly relevant to the *Left 4 Dead* series, although not an adaptation of any particular work, that it is a work of horror fiction, a fact that informs not only the design of environment and soundtrack, but also the rules, mechanics and processes implemented into gameplay.

As one of Linda Williams' so-called "body genres" (Williams, 3), horror relies particularly heavily on the physical and emotional affect of its audience, the genre being named and defined by the particular affect it intends to provoke. In contrast to other popular narrative genres in games, such as fantasy and science fiction, designing horror games is not a question of simply adding genre-specific objects or environments. While the inclusion of space ships or robots would suffice to label a game's story as science fiction, the mere depiction of a zombie does not make a horror story. A point in case is the tower defense game Plants vs. Zombies (2009) by PopCap games that features its titular zombies as almost cute cartoon figures, fighting and occasionally devouring their cartoon style plant opponents.In order to create horror, the zombie (or other creature) as well as the narrative woven around it must work to evoke the twin reactions "threat and disgust" (Carrol 28) that according to Noël Carrol are essential to "art-horror" or horror as a genre. Importantly, these reactions are not a mere question of appearance - something that could be adapted to digital games rather straightforwardly – as a threatening appearance of something that isn't in itself threatening is a disguise quickly uncovered even in media allowing less probing on the part of their audience.

The intention for this chapter is thus to examine how horror works and what features it entails in general as well as investigate some of the specific concerns of evoking horror through games based in part on the theory presented in the previous chapter. The framework thus developed can then be applied to the analysis of the horror game fiction that is the *Left 4 Dead* series in the following chapter. The first step in approaching horror will be a closer look

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¹⁹ Parts of this chapter, especially subchapters 4.1 and 4.2 are also published in the upcoming anthology *Körperlichkeit in digitalen Spielen*, edited by Rudolf Inderst and Peter Just.

²⁰ Carrol uses the term art-horror to distinguish between the horror encountered in art and horror as an actual emotion in response to real events.

at the concept of body genres and the involvement of the (audience's) body in fiction and perception in a wider context. This also includes the relationship between the body of the player and those on the screen in first and third person games. This is followed by a more direct examination of horror and its emotional effects based largely on Carrol's work. Then, with a more specific relevance to the following analysis chapter, I will look at the properties and structural make up of horror in film and the zombie as a horrific figure as well as its subgenre of zombie apocalypse fiction.

4.1. Embodied Experiences

Film scholar Linda Williams counts horror, along with pornography and the melodrama, as one of her three body genres, a term borrowed from Carol Clover. All three of these genres share a particular focus on "the spectacle of a body caught in the grip of intense sensation or emotion" (Williams, 4) to which the "body of the spectator" responds with "an almost involuntary mimicry of the emotion or sensation of the body on the screen" (ibid). While Williams primarily focuses on the gendered relation between bodies on and in front of the screen, a point to take away for any examination of a body genre is that these genres bank on and heavily operate with the physical affects of their audience. The reliance on physical reactions of the audience also becomes evident in the evaluation of works in these genres, which, according to Williams, are "often measured by the degree to which the audience sensation mimics what is seen on the screen" (ibid). This type of mimicry as an instinctive affective reaction is triggered by the presentation of the on-screen body "in the grip of intense sensation or emotion" (ibid), which Williams refers to as the body spectacle:

The body spectacle is featured most sensationally in pornography's portrayal of orgasm, in horror's portrayal of violence and terror, and in melodrama's portrayal of weeping. (ibid)

However, while these genres certainly feature particularly crass examples of the body spectacle as a central component of their works, the affective experience they induce in their audience is in no way unique to these genres. Rather, affective responses, although often unnoticed or unexamined, are part of both our experience of fiction as well as our everyday surroundings. To understand the way horror and other body genres coax their desired reactions from their audience requires an understanding of how we perceive even predominantly visual material (like film) in a sensual way.

In his *Phenomenology of Perception*, Maurice Merleau-Ponty positions the body as "the fabric into which all objects are woven" and "the general instrument of [...]

comprehension"(235). This means that we do not contemplate objects on a merely cognitive and abstract level, but rather that the objects we perceive are directly connected to our bodies which constitute our senses' "never-ending integration into one knowing organism"(233). We understand a work of art, as well as objects and events from everyday life, not only with our abstract mind, but with our bodies. In our understanding all our senses work as an integrated whole rather than that we perceive something with a single, isolated sense like vision. As a result of our senses' interconnectedness, we are also able to perceive traits that are not directly related to the "main" sense we perceive with. We are able to "[see] the weight of a block of cast iron which sinks in the sand, the fluidity of water and the viscosity of syrup" (230) and we can "hear the hardness and unevenness of cobbles in the rattle of a carriage"(ibid). Even when we cannot touch an object, our sense of touch is activated when we perceive it and registers the information relayed by other senses. In Merleau-Ponty's example, the sound of the cobbles triggers a sensation of touch, despite the body never physically touching the cobbles.

Following Merleau-Ponty, Vivian Sobchack attempts to locate and explain "embodied structures" in cinema and show how "intelligibility, meaning, and value emerge carnally through our senses" (8). This carnal engagement is also strongly related to our ability to identify with the visual content of a film. Sobchack describes a movie going experience in which her body (representative for the bodies of other audience members) reacts to a scene involving touch as both subject and object of the touch performed on screen. Adopting Merleau-Ponty's stance that perception affects and interacts with the whole body, she claims:

We, ourselves, are subjective matter: our lived bodies sensually relate to "things" that "matter" on the screen and find them sensible in a primary, prepersonal, and global way that grounds those later secondary identifications that are more discrete and localized. (65)

Our bodies identify with the actions on the screen given that they are within the realm of our sensual experience. Thus, we react with the characters as long as we can conceive of the experiences they are having, accessing what Sobchack refers to as "carnal knowledge" (63) or our sensual memory of previous sensual interactions. While viewers may not exactly embody a character in film, they nevertheless bodily react and relate to them and further relate the events and actions happening to and performed on the character body to their own physical selves, thereby encountering embodied experiences. In Williams' body genres, these events and actions are particularly extreme or excessive – hence Williams' choice of the word spectacle – but still just within our realm of carnal knowledge. In fact, body genres appear to build their tension precisely through maxing out their audience's carnal engagement, evoking

a degree of fear, arousal or physical or emotional pain that frequently threatens to cross the line of what the audience can handle – and sometimes does. In these cases, we may forcibly break the connection, for example by covering our face to shield ourselves from the events on screen during a film that is no longer just scary, but too scary.

So far, I have discussed the carnal engagement of audience to fiction primarily in regard to film. Although digital games are also a heavily screen-based medium and thus may in some ways function similarly, the concept of embodied experience is complicated by the tactile dimension of games, or interactivity. While the embodied experience of watching a film is a question of vicarious engagement with physical events outside the audience's control, digital games require the player to act and connect the player with the events on screen via the game's interface. Beyond the general necessity to physically act and react to impulses on the screen, avatar-based games²¹ – to which most non-abstract games belong – further require the player to connect to a single body in particular and ask them to conceive it as both themselves and Other. In this regard, the majority of game fictions constitute a different kind of body genre, or rather body fiction, as the player needs to form a personal relationship to the body on screen to so much as gain access to the fiction. Whereas in film we involuntarily mimic the actions and gestures of the body on screen, avatar-based games are designed so that the body on screen translates the actions of the player – the push of a button for instance – to the world of the screen and enacts it there. The avatar thus becomes the image of the player's presence in the game world, but at the same time works as a medium for the player enabling and thereby coloring their experiences of the game world through the shape and capabilities of the avatar body.

'Avatar' is the Sanskrit word for 'descent', and refers to the embodiment of a god on earth. It is by means of the avatar that the player becomes embodied in the game, and performs the role of protagonist. (Burn in Carr et al. 72)

If the player's connection to the game and game fiction is routed through a virtual body, this body becomes instrumental in structuring the player's understanding of the fiction. While the player may still react to other bodies on screen in the fashion described by Williams and Sobchack, the relationship to their avatar bodies is much more personal to a degree where it becomes muddled with the self, making the avatar both an extension of themselves in the game world as well as a character in its own right. Studying the relationship between players and their avatars, Andrew Burn observed, that players talking about events in a game refer to their avatar with varying pronouns depending on situation:

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²¹ Avatar-based games are all games featuring an avatar, an entity in the game that represents the player and through which the player gains access to the game world.

[The avatar] is 'he' when the representational system is most emphasized, and 'you' when the game system is most emphasized. (Burn in Carr et al. 83)

What becomes "you" after a play session, at the point where the player is no longer connected to the avatar, is more often "I" or "me" as long as the player is still playing. In roughly 100 hours of cooperative play time in the *Left 4 Dead* games, the first person is the pronoun predominantly used in regard to a player's own avatar, especially in relation to actions the player plans to execute through their avatar (e.g. "I will go back to the safehouse") and their avatar's health status (e.g. "I need a med pack" or "I am dead"). The third person is nevertheless still used even in active play, most predominantly when the character whom the player uses as avatar acts independently of the player in a way that does not affect the player or their goals, such as when the character speaks. This indicates, that on the one hand, players recognize their avatars as characters in the fiction – especially when the role of fiction (or the representational system in Burn's words) is emphasized – but at the same time claim ownership of the avatar's body and conflate it with their own. After play, when the connection to the body on screen is broken or suspended, the player also verbally distances themselves from the avatar body, using instead a more generic "you" as in "you, if you play the game."

The avatar can be perhaps best conceived of as a three-part entity comprised of player, player character (the avatar in its function of being part of the fiction) and the avatar body as the medium between player and screen. While the player character can for the most part claim the third person pronoun for itself, the avatar body is "you," a potential anyone, after play and "I," the same as the player, during play. Because the player primarily regards the avatar body as an extension of their own and perceives its senses and physical features as part of their own toolset, they may often not even be consciously aware of its existence as an entity, thus seeing it simply as "I." While the awareness, or lack thereof, of the avatar as body is subject to the avatar's role in the game section as described above (see also Burn in Carr et al. for more detail), the avatar body's physicality can also be emphasized or de-emphasized through various game design strategies.

In this thesis, I have occasionally used the term first- or third person games as a blanket term for a type of digital game that gives its players access to a three-dimensional game world via a single avatar body to which the players are bound with a (semi-)fixed perspective. While first- and third person games are in general very similar and share similar game genres (predominantly shooter, role-playing and action genres), their difference in their choice of fixed perspective creates a difference in the player relationship to their avatar body and affects their awareness of it. While third person games constantly represent the avatar's

physical form on screen, first person games attempt to simulate the player's identity with the avatar by adopting their perspective and typically revealing at most the iconic gun arm of first person shooters. While the former features the avatar body as a visible object, keeping it at all times represented as a physical thing, the avatar body of the latter threatens to be subsumed into the interface and makes itself apparent only as a number of abilities and restraints on player behavior and actions. Gordon Calleja in his paper on experiential narrative goes so far as to surmise that in first person games "players interpret the events happening in the game as happening to them" (4) rather than to a "packaged character" (ibid). Even though he qualifies this statement, by arguing it to be ultimately a question of the player's own disposition to the story, it nevertheless implies that the body of the avatar becomes absent from the game whenever first person perspective is used.

However, games may also draw attention to their avatar as organic entity in non-visual ways, such as labored breathing and reduction in speed as signs of exhaustion or a change in vision to depict the effect of stimulants and drugs. These methods draw attention to the body between the player and the screen by subjecting it to physical states the player generally does not share, thereby accentuating its non-identity with the player. Even where none of these non-visual indicators are used, the avatar's body remains nevertheless constantly present and determines through its shape and its physical capabilities which actions a player may perform in the game. A player can thus decide where their avatar should go, but they have no control over how fast or agile it may move as these are the properties inscribed into its body. In spite of the fact that the player's haptic experience of the avatar body therefore permeates the game and sets the parameters that make gameplay possible, the player is only rarely made aware of this other body as long as it feels and reacts as it is expected to.

In many cases, there is little need of making the player aware of the avatar body as they do not need to be aware of how their virtual body functions in order to be able to understand the game. But where the body fiction of digital games meets a body genre like horror, it both requires rethinking the way that physical sensations are induced in the horror audience as well as offers the opportunity to represent these sensations in a more personal manner. Rather than to simply physically relate to a vulnerable and threatened person, the player themselves can feel vulnerable and exposed to a threat to "their" avatar body. Rather than to simply fear the concept of the monster, players could acutely fear the monster for its ability to hurt what they perceive of as themselves.

4.2. Properties of Horror and Horrific Creatures

Horror as a genre, as the name implies, attempts to induce in its audience a physical and emotional sensation of horror. But while actual horror is something generally avoided and regarded as painful or unpleasant in real life, audiences of horror fictions actively and consciously seek out works of horror and derive enjoyment from them. In *The Philosophy of Horror or Paradoxes of the Heart*, Noël Carroll therefore first and foremost distinguishes between what he calls "natural horror" (12), the emotion of horror experienced in real life outside of the realm of art and "art-horror, that is, 'horror' as it serves to name a cross-art, cross-media genre" (ibid). Art-horror is designed to evoke "a sense of horror" (14) in its audience that relates to natural horror – ideally, the audience is indeed in some sense horrified by what they perceive – but that is despite ambitions to achieve "realism" embedded in a fictional context. The horror in art-horror is focused on a horrific moment that is not real, yet powerful enough to evoke this sense of horror. According to Carroll, a necessary element for evoking art-horror is not just a threatening event or character (as this would apply to many genres), but one that is additionally associated with disgust:

Rather threat is compounded with revulsion, nausea, and disgust. And this corresponds as well with the tendency in horror novels and stories to describe monsters in terms of and to associate them with filth, decay, deterioration, slime and so on. (22)

Threat and disgust thus work together to create the sensation of art-horror and are expressed through the figure of the monster, which Carroll deems a key element in horror (15). While Carroll limits his observations to the monster as creature, such as zombies, vampires and the like, the monster does not always need to be explicitly non-human, but can also be a physically "normal" human being. What makes this human being monstrous is their dehumanizing traits or behavior. This is the case in most slasher horror and other serial killer movies.

While Carroll's observations about the monster's threatening capacity are primarily focused on it being "cognitively threatening" (34), I would argue that it is as or even more important to take into consideration the monster's threat in regard to its ability of inflicting harm upon the human characters' bodies and/or the avatar body of the player. In either case, a physical threat to the bodies of the audience is implicit, although not in actuality realizable. Carroll distinguishes horror from terror, "especially of the sort rooted in tales of abnormal pychologies" (15) and thus it can be argued that while terror represents a threat to the psyche, horror primarily threatens the body: its physical integrity and our possession of it. Most monsters simply want to tear human bodies apart, others, for example vampires, want to

damage and corrupt it and others yet want to usurp bodies to use them as tools for their own purposes as is the case with many horror fictions featuring demons.

The ability of monsters to evoke disgust is according to Carroll linked to their impurity. We perceive something as impure if it transgresses existing categories, if it is categorically interstitial:

Things that are interstitial, that cross the boundaries of the deep categories of a culture's conceptual scheme, are impure, according to Douglas. Feces, insofar as they figure ambiguously in terms of categorical oppositions such as me/not me, inside/outside, and living/dead, serve as ready candidates for abhorrence as impure, as do spittle, blood, tears, sweat, hair clippings, vomit, nail clippings, pieces of flesh, and so on. (31-32)

Monsters are either associated with impurities as those named above or constitute a categorical transgression in and of themselves. Zombies are neither dead nor alive, occupying the interstitial realm of the "undead." Werewolves are both men and wolves: neither animal nor human being. Many more grotesque monsters are creatures that are hybrids of existing things. Carroll contends that horror creatures' in-between-ness adds another dimension to the threat we perceive in them:

They do not fit the scheme; they violate it. Thus, monsters are not only physically threatening; they are cognitively threatening. They are threats to common knowledge (34)

This inability to locate monsters in existing categories threatens not only common knowledge but also encroaches on the border between self and other. Horrific monsters challenge the ability to make meanings: monsters cannot be made sense of, they cannot be located and thus cannot be understood. Furthermore, many monsters specifically challenge the categories of human/not human, thus threatening the space of the self as they are neither "us," nor are they wholly something else. The monsters of horror epitomize what Julia Kristeva's calls the abject. They are "a 'something' that I do not recognize as a thing" (Kristeva 2), something which does not allow the clear stance of opposition that we can take towards the object, but instead "draws me toward the place where meaning collapses" (ibid). The abject is interstitial, it is "between I and Other" (Kristeva 7) and it horrifies because it encroaches on the space of the I and makes us incapable of affirming our selfhood in its presence in a manner that distinguishes "us" from "it." A horrifying monster threatens not only the physical body of the human characters in a horror fiction but also their (and the audience's) position of the self that cannot be reaffirmed until the monster is removed or destroyed.

Finally, whether the audience finds a monster horrifying is also influenced by the human characters in a horror fiction. Carroll believes that the "positive human characters"

(17) model the audience's ideal reaction, prompting them to repeat and recreate their emotional state:

For horror appears to be one of those genres in which the emotive responses of the audience, ideally, run parallel to the emotions of characters. Indeed, in works of horror the responses of characters often seem to cue the emotional responses of the audiences. (Carroll 17)

I believe this degree of identification and this "mirroring-effect" (Carroll 18) of emotional states is crucial to the audience's understanding of a threat to the human characters' bodies as a threat against their own. This relates back to Sobchack's ideas of identification as carnal knowledge. When mirroring the characters, the audience not only feels the same or similar anticipation but they feel with the characters, adopting their sense of threat as their own. If positive human characters are present and do not find the monster horrifying, the audience in turn will not perceive the monster as a threat to their own bodies. The character's lack of horror signifies to the audience that the monster is a manageable danger. Plants vs. Zombies would be a whole different game, if the titular plants would react with horror and fear rather than blissful indifference to the invading zombies. Thus, to be categorized as art horror, a fiction or artwork must present a creature that is threatening as well as impure, meaning that it transgresses existing categories, and evade the threat management the positive human characters are prepared for.

Moreover, it is significant, that the threat the monster poses to the body tends to be resolved positively or negatively through the use of (often very graphic) physical violence and that it is this violence that reduces rather than increases tension. Horror fictions generally include an element of destruction of either (some) humans or (some) monsters, that not necessarily needs to be but often is, explicit. Particularly in regard to films and games, the work of horror is often advertised by praising its degree of graphic violence. According to Carroll, those delighting in gore are simply "metaresponding to their own revulsion" (193), but I would argue that gore serves the function of severing the bond between viewer or player and screen and therefore allows them to distance themselves from the body being violated. Sobchack stresses that the "relational structure" (79) between the body or bodies on the screen and the viewer "can, of course, be refused or broken – and, indeed, it often is when the sensual experience becomes too intense or unpleasurable" (ibid). Horror oscillates between establishing a relation between viewer and screen and breaking it, intentionally using the intensity of gore as a safety net that can reassign abject monster or identificatory human body to the non-threatening state of object. Extreme graphic violence enacted on the body is a state

that our own body cannot relate to and thus we no longer perceive the abject as encroaching on the space of the self and in the case of a person's death, we can no longer react with them:

That is, conventionally the corpse signifies, first, the deterioration of materially embodied being into absolute "thing-ness" and then into absolute "no-thing-ness"—both experientially unknown (and unknowable) states of "being." This is not to say that we do not respond physically, emotionally, and cognitively to the sight of what is believed to be a real corpse on the screen but rather that we respond to it always as other than we are and as an object. (Sobchack 236)

While the corpse and violence are ordinarily received as disturbing, in horror fiction they can be received with pleasure (as well as with shock) because they relieve tension. While the monster's abject qualities threaten a collapse between "it" and "us," its death and its physical mutilation allow the audience to reaffirm in contrast their own physical integrity.

4.3. Horror Film

While a chapter dedicated to horror *film* in particular may seem somewhat out of place in a thesis focusing on horror games, it is important to acknowledge that digital games in being in large part a visual medium can draw on horror film's wealth of techniques and conventions already developed to evoke fear and disgust on an audiovisual level. The connection between film and game and its significance in the creation of horror game narratives has also been emphasized by Barry Keith Grant in his essay "Screams on Screens: Paradigms of Horror:"

Insofar as both film and videogames are visual forms that unfold in time, there is no question that the latter take their primary inspiration from the former. [...] It is impossible to not acknowledge that horror videogames employ the iconography and conventions, visual strategies and narrative premises of the horror film. (1)

According to Grant, horror games "fall within the scope of filmic horror," (15) but also extend that horror by letting the player "go off on [their] own to explore the space on [their] own as part of the journey" (ibid). While I argue that the game specific dimension to horror narratives in games extends to many aspects of the game beyond the player's exploration of space and that the horrific in these game narratives should not be reduced to its filmic aspects, Grant rightly points fellow researchers in the direction of horror film in order to understand the horror of horror games.

How then does cinematic horror make the audience shudder? According to Blair Davis and Kial Natale, the visually diverse field of horror film uses two main strategies to create its effect:

Horror, as an umbrella genre of pessimism and mortifying suspense, generally has two common methods for unsettling the audience: that of a tainted or deadly atmosphere (the thriller) and that of the graphic presentation of violence or death. (39)

Despite identifying gore and atmosphere as two separate strategies, Davis and Natale nevertheless stress that they may and often do appear in combination, resulting in passages that "might create an atmosphere of omnipresent danger and end with a gruesome murder or discovery" (39). Despite the end result of horror film being a "consistent, graphic examination of the macabre" (Davis and Natale 29), I agree that an examination of its visual strategies should begin with a division of uses of gore and uses of mechanisms of suspense.

David Scott Diffrient makes an argument for the particular position of gore in an examination of the genre by positing it as one trait that sets the horror film apart from genres that otherwise share horror film's atmosphere of suspense and uncertainty:

Perhaps what distinguishes horror films from their (usually) less bloody generic brethren (thrillers, noirs, mysteries, sci-fi, disaster films) is their frequent refusal to cut away from acts of violence. (55)

Even though gore has neither been part of horror film from its beginnings – Stephen Prince attributes Hitchcock's *Psycho* (1960) of having "linked [the horror film] with graphic violence" (4) – nor is it at current an element unique to the genre, ²² gore is nevertheless a central element in the majority of modern horror film.

The term gore is generally equated with graphic violence, although what exactly this entails may of course vary according to conceptions of graphic as well as violence. Davis and Natale define the term as follows:

Gore then, as defined by this study, includes the explicitly visible, filmic representation of bloodshed or its direct result: the on-screen defacement or mutilation of— and/or penetration of objects into— a body, as well as the exposure of blood, sinew, organs and/or viscera resulting from such actions. Gore is therefore intrinsically defined by its bodily context: from the decayed flesh of a corpse to the residual blood splatter caused by a zombie bite or knife wound, gore involves a process whereby the human body is in some way wounded (typically by an exterior force or object) and its natural corporeal state altered (be it through blood loss, flesh distortion, physical transformation, and so forth). (40)

The relation of the graphical violence in modern horror and the physical body is also noted by Prince, who argues that modern horror identifies itself by "the attack on the body" (7). Gore as a particular representation of violence is undeniably tied to highly visible physical mutilation.

²² In measuring the prevalence of gore in contemporary horror films, Davis and Natale note that an episode of the crime TV series CSI contains more gore than many horror films despite being only half as long. (Davis and Natale 50)

A more unique stance is Davis' and Natale's division of "active" and "passive gore" (41) to include both violence on-screen as well as depictions of the aftermath of off-screen violence in the definition of gore. While active and passive gore certainly share the same visual identifiers – the exposure of "blood, sinew, organs and/or viscera" – it bears repeating that active gore is a particular staple of horror resulting from its "refusal to cut away from acts of violence" (Diffrient 55). That is not to say that horror film does not also flaunt images of off-screen aftermaths (a fact also proven by Davis and Natale), but that active gore in particular is an ingredient of many horror films with effects going beyond that of passive gore. Both active and passive depictions of gore horrify in the sense that they evoke disgust as well as denote threat (generally by the perpetrator of the depicted violence), but active gore for one intensifies these affective responses by enabling a "prolonged and intensive assault on the viewer's sense of security and well being" (S. Prince 6) and further serves to violently sever the empathic bond between viewer and victim. As I have argued in the previous chapter, gore, being extreme enough to be inconceivable on a personal physical level, can be used to both expel the abject monster from the space of the self as well as reduce the identificatory human body of the victim to the "thing-ness" (Sobchack 236) of the corpse. To this end, active gore is essential because it depicts the transformation of monster or victim from one state to the other, whereas passive gore does not so much depict transformation as it represents one body in two different states (alive and dead) on two separate occasions. Passive gore waits with the presentation of the body until the viewer has already empathetically detached, while active gore turns the act of detachment into an event compounded with shock, surprise and disgust. Depictions of active gore may be actively desired by the film's audience, because the more violent and excessive a mutilation becomes, the less can audiences relate what happens on the screen with their own bodily experiences. While death by itself cannot entirely be understood, this counts double for the direct visual depiction of violent dying and thereby more thoroughly removes viewers from an object of active gore at the same time as it terrifies them.

Even though an important element, gore by itself however cannot account for the entirety of horror film aesthetics, especially as films can be classified as horror that do not contain any gore at all. What accounts then for horror film's threatening atmosphere is not

just a question of content,²³ but chiefly a combination of certain uses of lighting, camera work and sound.

The use of low-key lighting constitutes a substantial part of what connects horror film to its "generic brethren" (Diffrient 55) the thriller, film noir and mystery film. In his article "Horror Meets Noir," dealing with the close connectedness of the two genres, Blair Davis describes the use of low-key lighting that is crucial in creating the unifying aspects of both genres:

Horror and noir both specialize in mood, primarily through the use of low-key cinematography, by which the set is deliberately under-lit. Low-key lighting allows for an effective contrast of bright light and deep darkness, creating rich shadows that serve to establish an effective form of mood. Through this shadowy imagery, horror and noir both mastered the art of making the dark come alive on screen. (196)

Resulting from the traditionally low budget of both genres, this method of low-key lighting has contributed to some of their core motifs. In the introduction to *Horror Film: Creating and Marketing Fear*, Steffen Hantke mentions the horror genre's "preference for night time" (vii), a result, at least in part, of the set lighting. Another genre cliché resulting from low-key lighting and prevalent in both genres is the motif of the shadowy figure:

Both film noir and horror films present the viewer with sinister figures and shadowy settings; each specializes in shady characters, literally and figuratively, in terms of dramatic mood and cinematic style. (Davis 193)

In these shadowy surroundings, objects both animate and inanimate continually elude closer observation by the audience, feeding curiosity, but also fear, contributing significantly to the creation of suspense.

This sensation of suspense of not-quite-seeing and not-quite-knowing what happens in the shadows is amplified by horror film's deliberate turning away from unifying cinematography and editing. Contrasting it with the camera work of horror film, Diffrient describes classical editing as a tool for establishing coherence:

Codified as a set of techniques whose intent was to lend spatio-temporal continuity and narrative coherence to film, classical or continuity editing became standardized as a cinematic syntax in the first decades of the twentieth century. With the camera as an "ideal" rather than an actual observer, the classically constructed film renders the visual field intelligible through eyeline matches, shot-reverse-shot scene construction, and matching-on-action. (64)

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²³ Horror film or horror in general is nevertheless largely classified by content. Horror films as a rule feature some type of monster (whether creature or slasher) that makes its presence felt at the least in an indirect way, as for example in *The Blair Witch Project* (1999). Horror films further heavily work with "recurrent settings, like the haunted house" (Hantke, *Horror Film* vii) that make films more immediately recognizable as members of the genre.

Conversely, the suspenseful portions of horror film are often "shot entirely in one long take" (Diffrient 57), with the camera thereby mimicking an actual rather than an ideal observer, complete with blind spots. This creates even more uncertainty of what might lurk in the darkness of the under-lit mise-en-scène. Further, horror film's favoring of close and medium shots (Vossen n.p) creates the possibility of off-screen threats existing in dangerously close proximity to camera and/or the identificatory human character in the frame. The space around the identificatory characters is extremely limited, exposing the character, with this limiting aspect applying to cinematic frame as well as architecture. In "Dark Rides, Hybrid Machines and the Horror Experience," Angela Ndalianis observes that most horror films "involve an entry into an enclosed space" (21), adding a claustrophobic quality to the journey into the unknown or unanticipated in the dark. This visual style of suspense and threat is complemented by the films "narrative context [...] as well as sound cues [that] play a significant role in setting the emotional tenor of a threatening situation" (Diffrient 54).

Of course, suspense is not all there is to horror film and any however long sustained atmosphere of suspense needs to eventually be somehow resolved. In most horror films this resolution is executed in a sudden and, despite the atmosphere of foreboding, unanticipated form. According to Steven Jay Schneider, this combination of suspense and surprise forms the dual dynamic of the most shocking horror films:

[...] horror that results from creatively combining suspense (following Hitchcock, and at the most basic level, when the viewer is forewarned about the danger facing the person or people being watched onscreen) and surprise (where such forewarning is lacking) in cinematic narratives. As I have argued elsewhere, despite what may seem to be their mutual exclusivity, surprise can actually be mixed with suspense to produce horror if the forewarning given the viewer is too brief and/or too unspecific to prepare one adequately for the violent spectacle that follows. The efficacy of this technique [...] stems from the manner in which it exploits audience expectations [...] while providing a disclosure so shocking and outrageous as to simultaneously defy those very same expectations. (145)

As Schneider's mention of "violent spectacle" implies, this surprise often (though not always) takes the form of gore. While the effect and purpose of gore as visual content has already been examined at length, what is still lacking is the mode of delivery of these and other images – including even imagery of non-events – that make the audience jump. How do these images manage to sneak up on the viewer even when ample forewarning is given?

In his article, Diffrient argues that the device responsible for giving this imagery such a powerful effect is the shock cut, like horror named after the affect it produces and further described by Diffrient as "a sudden, violent eruption or peak moment in a film narrative" (52).

The shock cut creates a sudden gap in a film's narrative as well as visual content, thereby in effect disorienting the viewer:

A shock cut [...] denotes a swift and jarring juxtaposition of two shots whose visual incongruity hinges on a profound contradiction: the intrusion of new narrative information as well as a temporal and/or spatial gap in a story's unfolding. (Diffrient 54)

Shock cuts thus create "a violent rupture in the diegesis" (Diffrient 53) and thereby mirror the often violent and gory visual content of the shock cut with violence enacted on the material level of the film, "an equally brutal splice perpetrated on the unsuspecting filmstrip" (Diffrient 56). Shock cuts thus bring the violence to the level of "narrative itself" (ibid), meaning they incorporate it into the very structure of storytelling, turning the narrative of horror film into "an act of physical and psychical annihilation" (ibid) on various levels of meaning-making.

The jarring-ness of the shock cut "hinges on speed and motion" (Diffrient 63), affecting viewers because it comes suddenly, with incomprehensible movement and lasts only briefly:

Nanoseconds of visual information, shock cuts crash through the narrow corridor of human cognition to expose the contiguity of people to objects and forces beyond their control. This fearful proximity is enhanced by the porous boundaries of the film frame, which in the horror genre is particularly amenable to the forces onscreen entrance of offscreen threats. (Diffrient 61)

Of course, just as is the case with low-key lighting in the creation of suspense, to achieve its effect the shock cut "is dependent on tone and pacing, on the contextual setting of a real or phony threat" (Diffrient 62) and is therefore only one, albeit an integral, part of creating the event of surprise that follows suspense. One element crucial in supporting the shock cut is the use of music to mirror the jarring effect of the visual on an aural level:

Shock cuts often hit on the wallop of a pistol shot [...]. They are sometimes delivered on the ping of a xylophone or the beat of a kettledrum [...]. They might be accompanied by crashing cymbals [...] or syncopated with electronic gurgles and gongs [...]. (Diffrient 58)

The pervasive role of music in accompanying and anticipating every event in horror film leads Diffrient to describe horror films as "carnivals of noise" where "every swish-pan of the camera or unexpected movement of an actor is accentuated by delirious sound" (57).

Ultimately, it deserves repeating that the surprise, shock and jolts delivered by shock cuts bring horror to the screen only in a dynamic relationship with the dark, eerie and drawn out sequences of suspense. While suspense sequences evoke a sense of threat and discomfort,

shock sequences, often through the use of gore, bring this threat to a temporary peak and simultaneously relieve the tension by revealing the unknown. Shock sequences work with "rapid visual movements, claustrophobic framing, sudden reaction shots, and discordant sound modulations" (Diffrient 58-59), while suspense sequences use the same claustrophobic framing with long takes in dark, shadowy settings with eerie sounds that build up to and often anticipate the shock sequence.

4.4. The Figure of the Zombie

While first appearing on the screen in the 1932 film *White Zombie*, the contemporary zombie as a staple of not only horror film, but popular culture at large takes its beginnings in George Romero's *Night of the Living Dead* (1968). *White Zombie* adapted the concept of the zombie from Haitian folklore, bringing it to a Western mass audience. In the film, zombies appear as the undead and unfeeling slaves of the voodoo master Murder Legendre, the horror of this zombie tale being voodoo magic and unquestioned subjugation. Romero remodeled this figure rather extensively, taking only the most basic identifiers from the zombie of early cinema and embedding it in the context of infectious disease and soulless, uncontrolled destruction. While the horror story of *White Zombie* has at its heart an evil mastermind pulling the strings, the type of zombie Romero brought to screen and that spawned the modern zombie film, is defined by its complete uncontrollability and lack of any agenda beyond killing and eating humans.

Beyond counting as the father of the contemporary zombie, Romero's zombie film making activity also fairly accurately maps the public interest as well as the general activity in the zombie genre. Excluding remakes of his original films, Romero has made one major zombie production each in the 70s and 80s – Dawn of the Dead (1978) and Day of the Dead (1985)— and then after a decade that only saw a remake of the original Night of the Living Dead (1990), three new films in the 2000s, namely Land of the Dead (2005), Diary of the Dead (2008) and Survival of the Dead (2009). This activity fairly precisely coincides with Davis' and Natale's observations of the zombie film genre in general: it has "not regularly [been] seen since the mid/late 1980s" (36), but reemerged in the 2000s at least partially independently of Romero's activity "in large part due to the success of 2002's Resident Evil and 2004's Dawn of the Dead remake" (36). The zombie genre is now more popular than ever, represented in film, digital games, comics and prime time television and brought to the streets during the annual zombie marches by horror fans in cities throughout the globe. While this popularity and sheer mass of zombie products naturally also introduces quite a bit of

variety, I will nevertheless in the following attempt to present the traits and behavior of the contemporary zombie as well as map some of the staples of modern zombie fictions.

The post-Romero zombie is in its essence a very on-the-mark embodiment of Carroll's horrific monster. It is interstitial in the sense of being between living and dead as well as between functional and decomposing. It threatens our bodies through its continuous and untiring attempts to tear human bodies apart, but its threatening capacity extends beyond this personal physical threat. The zombie is "cognitively threatening" (Carroll 34) in more ways than through simply being interstitial: it is not just between living and dead, but it further represents the end of human consciousness as well as the pervasion and corruption of the human body.

The former is one important aspect in which the zombie differs from the vampire, a figure that in modern fictions has often become much more representative of our desires rather than our fears. Both are walking corpses and are able to corrupt human bodies into creatures of their own, aspects that can be more or less threatening depending on how much the corpse-ness of the creature is emphasized and how much the human-to-creature transformation is seen as a destruction of humanity. But what has made the vampire a much better candidate for a protagonist of not only horror, but romance, than the zombie, is the eternal preservation of human consciousness and body it represents. Even where vampires are depicted as having lost some of their humanity, or their soul, their consciousness, their thoughts and memories, is still intact. Their bodies, even where they show signs of deformation or ugliness, are generally free from decay. Vampires are intelligent and they are made forever. Zombies are neither and therein lies a large part of their appeal. The zombie, at least the Romero-zombie, violates even our categories of the monstrous. Whereas the zombie workers in White Zombie could still be cognitively processed as mindless automatons, the contemporary zombie is mindless, but not a tool. It has further transcended death, but it is still subject to its effects: where death could not stop the zombie, it seems self-evident that decomposition eventually will. The loss of both mind and body makes it both irredeemable²⁴ as well as irreversible.²⁵ The transformation of human to zombie is generally not coupled with desire, because the human does not gain anything desirable from the transformation.

²⁴ The vampire's (or other monster's) redemption is a trope that is for example regularly revisited in the TV series *Buffy, the Vampire Slayer* (1997-2003), where numerous creature characters – the two vampires Angel and Spike as well as the vengeance demon Anya – join the human team to redeem themselves for past deeds and earn the love or affection of human characters in the process.

²⁵ This irreversibility of the contemporary zombie distinguishes it quite noticeably from the zombies in *White Zombie* where damsel in distress Madeleine Short was ultimately cured of her zombie state with no effect on her physical health.

The mindlessness of the zombie is a particularly threatening attribute not only regarding as described above the prospect of becoming one, but also the simple action of confronting one. Zombies cannot be reasoned with, their empathy cannot be appealed to and they cannot be understood. Adding to this the fact, that physical attacks (apart from headshots and decapitations) have little impact on the zombie, reveals a depiction of the zombie as a creature that cannot be influenced through mental or through physical powers. The zombie thus becomes an embodiment of human powerlessness.

This powerlessness revealed in the face of the zombie is further accentuated in many zombie fictions. As mentioned above, from Night of the Living Dead onwards, the zombie threat has been connected to infectious disease, with humans becoming infected and subsequently zombie themselves when bitten. While Night of the Living Dead still ends with the zombies being burned and thereby contained, many subsequent zombie fictions depict the spread of zombie infection beyond the scope of a containable or curable epidemic. Instead, the zombie depiction is either implicitly or explicitly depicted as a wide-spread pandemic that has evaded and broken down all efforts of containment. Contemporary zombie fictions are therefore often (though not always) also fictions of (post-)apocalypse, depicting the destruction of human civilization and the experience of individual humans and small groups living in its aftermath. While some fictions depict the development of the infection in careful detail – this is the case in Romero's Diary of the Dead and also, in a subtle manner, in the humoristic Shaun of the Dead (2004) - others intentionally skip this stage, planting their human characters straight into the post-apocalypse. In the film 28 Days Later (2002) as well as in the comic series *The Walking Dead* (2003-present), the story's protagonist wakes up from a coma in an abandoned hospital with the world already in shambles. In the 2009 film Zombieland, the first infections as well as the protagonist's own first contact with zombies are shown in aloofly narrated flashback sequences, the present time of the film being set some two months after the spread of the disease. In the former case, the failures of government and other officials in containing the disease is depicted directly, often by showing "ordinary" citizens, who find they have nobody to turn to.²⁶ In the latter, this failure is acknowledged in depictions of the aftermath: the hospital scene of both 28 Days Later and The Walking Dead (also depicted in the comic's 2011 TV adaptation of the same name) projects a powerful image because it depicts a major center of managing and curing diseases abandoned and destroyed, a symbol for the failure of normal human responses to disease.

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²⁶ In *Shaun of the Dead*, the zombie disease is actually eventually contained with the film's depiction of failure focusing more on the complete inattentiveness of citizens to the early stages of the infection.

With this in mind, it is little surprising that settings that represent the failure of the authorities and/or the defeat of contemporary human civilizations regularly appear in zombie fictions. In addition to the hospital, other civic institutions like police stations, public schools or hubs of transport make appearances. Other settings revolve around perverted, ransacked versions of everyday places, such as stores, bars, office buildings or restaurants, offering a close, personal image to the devastation spread by the disease. Among the perhaps most iconic imagery of zombie fictions is the highway clogged with miles and miles of abandoned cars, and the mall. While the highway scene appears in several of the zombie fictions named above, and many others, the mall image receives its iconic status primarily from Romero's Dawn of the Dead and its 2004 remake, which held the status of highest-grossing zombie film until 2009's Zombieland (Gray). Romero's mall setting achieved a lasting impression on the film's viewers, because it served not only as backdrop for zombie violence, but allowed Romero to provide a "satiric view of the American consumer society" (Ebert), prompting film critic Roger Ebert to declare the film "one of the best horror films ever made." While certainly not all zombie fictions featuring this iconic mall setting criticize consumerism, the use of the setting immediately evokes the imagery of the classic. In the browser-based massively multiplayer online game (MMO) Urban Dead (2005-present), the malls in the fictional city of Malton are the most populated and most fought over buildings in the game, partially because of their strategic function, but also because when the zombie apocalypse strikes, you go to the mall; a lesson the Dawn of the Dead films have taught zombie fans despite their grim endings. On a simpler level, the mall also impresses as a post-apocalyptic setting, because it, like the town square, often functions as a center for local life and activity. An empty mall thus evokes a similar eerie feeling as the imagery of empty, deserted London in 28 Days Later. While contemporary zombie fictions thus largely follow the tradition established by *Psycho*, that "imagined the site of horror in the quotidian world of the viewer" (Grant 12), they nevertheless occasionally return to classic sites of horror fictions. Night of the Living Dead opens on a cemetery scene and the image of a zombie bursting forth from its grave has become so ingrained in popular culture that it is now more the stuff of parody than of genuine horror, appearing in the "Treehouse of Horror" episodes of *The Simpsons* as well as in child-friendly games like *Plants vs. Zombies*.

The zombie as a creature of humor rather than horror and the use of zombies in non-horror fictions in general is a subject that needs to be explored especially in its relation to the conception of zombies in digital games. Firstly, humor is not necessarily incompatible with horror and horror films, especially those of a lower budget are filled with intentional as well

as unintentional hilarity. When well executed, a zombie can be disgusting, frightening *and* somehow funny. In his description of *Dawn of the Dead* as "graphic" and "shocking," Ebert makes note of what he calls "some curious discoveries:"

One is that the fates of the zombies, who are destroyed wholesale in all sorts of terrible ways, don't affect us so much after awhile. They aren't being killed, after all: They're already dead. They're even a little comic, lurching about a shopping center and trying to plod up the down escalator. Romero teases us with these passages of humor. We relax, we laugh, we see the satire in it all, and then -- pow! Another disembowelment, just when we were off guard.

It is this humor inherent in the figure of the zombie (especially when depicted through visual means) that, compounded with our growing familiarity of it, can turn it from horrifying to simply absurd. This can be observed in any horror film (with or without zombies) that simply does not succeed in terrifying us, but it can also be done deliberately for reasons of satire (as in The Simpsons) or simply as a convenient plot device. A case in point for the latter phenomenon is the aforementioned Zombieland. Despite the world of the film being populated with many, well-created zombies, there is surprisingly little horror in the topgrossing zombie film. The film can be largely understood as a romantic comedy with the zombie post-apocalypse serving as a plot device that brings the film's introvert college student protagonist (going by the pseudonym "Columbus") into unlikely company. The bashing in of zombie skulls with baseball bats and other weapons is depicted less as a fight for survival and more as a recreational activity that brings the survivor characters closer together, similar to the protagonists of the decidedly non-horror and non-fantastic film Garden State (2004) listening to Indie music. While the zombie encounters have been brought to the screen with great make-up and often impressive gore sequences, they are hardly scary and the zombies, lacking any sense of threat, cease to be horrifying. There are two reasons for this lack of horror. Firstly, the film's survivors (perhaps with the exception of the film's dramatic finale) appear neither fearful nor disturbed in the face of the zombies. In fact, they go out of their way in order to have encounters with them, stopping at random stores for the sole reason of killing zombies. Secondly, the film uses hardly any traditional horrific elements. The existence of zombies, gore and the occasional use of a shock cut to deliver it are about the only elements that could classify the film as horror. Otherwise, the film employs conventional pacing and camera work, many long shots and many daylight, open-air and otherwise well-lit settings.

The film's use of zombies as primarily a thing to shoot and hit with blunt objects gives it the distinct feel of a game. In fact one of the survivors, the 12-year-old girl Little Rock

references this by making an off-hand remark about "all those violent video games" after indiscriminately firing a gun. Zombies, without any need to horrify, are the ideal enemy in games revolving around shooting or otherwise killing things. While the vampire stripped of its horrifying qualities becomes simply a person, the zombie stripped of horror is little more than a moving, sometimes attacking, object. They are enemies, upon whom players can enact violence without moral dilemma, because, to quote Ebert, "they are already dead" and what's more, they do not even feel it when we sever their limbs with chainsaws. The previously discussed Plants vs. Zombiesepitomizes the function of the zombie in many video games. It makes little difference whether the zombie is depicted as cartoonish and goofy as in *Plants vs.* Zombies and Burn Zombie Burn! (2009), or their more ugly and gross counterparts as seen in the *Doom* series (1993-2009): in both these cases the zombie is not there to disturb or horrify, but simply to die, preferably in ways satisfying to the player. Games do not need to feature the iconic Romero-style zombie in order to use this trope and may instead rely on zombified or zombie-like creatures that fit better into the game's story, but provide the same function. In Half-Life, the "headcrab" alien zombifies scientists and other humans, conveniently covering their faces, so that shooting them does not resemble an act of homicide. The Mass Effect Series features the cyborg-like husks, humans/corpses whose bodies have been corrupted and reanimated by a race of rogue AI and that visually largely resemble zombies. In both of these games, the zombie surrogates are low-level enemies that can be dispatched fairly casually. This use of the non-horrifying zombie as generic enemy object is important to take into consideration, because it leads to the need to differentiate between a zombie game and a zombie horror game. It also prompts games with horror aspirations to find ways to make their monsters truly horrifying, rather than just so much cannon fodder.

5. Experiencing Horror in Left 4 Dead

In terms of its gameplay, the Left 4 Dead series can first and foremost be understood as a first-person shooter: the player's perspective is aligned with what is assumed to be the avatar's eyesight and the actions available to the player largely center on the use of firearms. Secondly, the series also stands in the tradition of the survival horror genre and is defined as such by Valve's Michael Booth ("AI Systems" 2). Both of these are generally handled as what I have referred to as game genres, classifying games according to gameplay rather than fiction. Although survivalhorror certainly also defines the narrative genre of its games, it is usually not used to set its games apart in terms of narrative. While the Left 4 Dead series is not unique in combining gameplay elements of these two genres, they are nevertheless not obvious matches. FPS games traditionally aim to empower their players, giving them weapons and ample ammunition and, in case of player death, allowing them to "respawn," to reappear somewhere within the game space with little penalty. Survival horror on the other hand, as the use of the term horror in the name implies, attempts to evoke fear and make its players feel decidedly out of control. In "Proliferating Horrors," Richard Hand describes survival horror as a genre "in which the player leads an individual character through an uncanny narrative and hostile environment where the odds are weighed decidedly against the avatar" (117). While the FPS usually allows their players to solve nearly every problem with violence, from encountering characters to opening doors and crates, in survival horror the protagonist's lack of power or ammunition may disable these options and "frequently require[s] players to run or hide, avoiding combat, in order to make it to the next level (Chien 64). The Left 4 Dead series combines the perspective, wealth of weapons and shooting-prone gameplay of the first person shooter with the atmosphere, comparatively underpowered protagonists and survival/escape-based objectives of survival horror. And, a key point, Left 4 Dead is cooperative and despite this feature not being in tradition with the survival horror genre, adapts a staple of zombie fictions from film to the game: the group of abandoned survivors forming a team against the apocalypse.

Skipping over both the state of normalcy as well as the initial spread of the zombie disease, the Left 4 Dead series begins its storytelling in a world already infected and the evacuation procedures nearly completed. The cause of the outbreak is not explained and the weeks following the outbreak as well as the initial evacuation process are only hinted at in fragments such as graffiti and posters. The main plot of both Left 4 Dead games deals fairly straightforwardly with the four survivors' quest to reach an evacuation point and survive. On the way, they must fight their way through a variety of zombies and manage to reach the

occasional safe houses set up, but abandoned by the Civil Emergency and Defense Agency (CEDA) that organizes the evacuation. In the original *Left 4 Dead*, the four survivors Bill, Francis, Louis and Zoey make their way through the American north-east, getting rescued several times by helicopters and boats only to wind up stranded again in the game's loosely connected campaigns, each ending with one rescue scenario. *Left 4 Dead 2* follows the same basic structure with different survivors and a different setting. Here, Rochelle, Coach, Ellis and Nick find themselves stranded in Atlanta, Georgia and make their way towards New Orleans. Both games tell their story in a basic chronological order connecting all campaigns and ending in a seeming final rescue, although the campaigns of the second game follow a much closer narrative sequence. While facing the risk of being killed, the survivors are portrayed as being immune to the zombie virus, becoming only injured when attacked rather than zombie themselves. The second game more thoroughly addresses this immunity and the implications for those who have it and those who don't.

When playing the game in standard cooperative mode, players can choose any of the game's campaigns to play and may choose one among the four survivors as their avatar. Each campaign is subdivided into several levels with a safe house at the end. The player's objective is to reach their safe house. The final level consists of a rescue scenario that usually requires the players to hold out and wait for the rescue vehicle. Apart from this flight-rather-than-fight objective, playing a Left 4 Dead game is in many aspects like playing a traditional FPS. The survivors are outfitted with a primary and a secondary weapon²⁷, health items, such as a first aid kit and painkillers or adrenaline shots, ²⁸ and a slot for throwable weapons, like Molotov cocktails or pipe bombs. Ammunition is limited and can be found along with further weaponry and health items scattered throughout the game environment. Generally, the player sees of their avatar only their hands, holding whichever item slot the player has currently activated²⁹, and only sees their whole body in third person perspective when healing or when attacked by certain "Special Infected," zombies with special abilities. The enemy population in the game is made up of three tiers: weak and numerous "Common Infected," three to six types of somewhat stronger Special Infected with unique abilities and "Boss Infected," the Tank and the Witch, special zombies with powerful attacks that often require group attention.

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²⁷ Primary weapons can be several types of rifles, shotguns and machine guns, while secondary weapons can either be pistols or, in *Left 4 Dead 2*, a broad range of melee weapons from guitar to katana.

²⁸ In Left 4 Dead 2 only

²⁹ In the original *Left 4 Dead*, the players can also see their avatar's lower body when looking straight down, but this has little relevance in regard to bodily presence as the players will only very rarely adopt this particular perspective.

All of these types of enemies can be killed, but many of them can also be avoided when the players do not wish to kill them.

The standard game mode for the *Left 4 Dead* games is cooperative, allowing up to four players to play the survivors, with the survivors not chosen played by friendly AI (artificial intelligence or "bots"). However, both games further offer a variety of other game modes, some of which adjust the standard campaign (Single Player, Realism and Versus) while others (Scavenge, Survival) use only part of the game environment and mode-specific goals, providing a standalone experience. I will here focus primarily on the standard cooperative campaign mode and Versus mode, in which players are invited to experience the game and its story from the other side, playing zombies. I will not consider the Single Player and Realism variants of campaign mode unless needed, as they by and large do not make significant changes to the standard campaign mode,³⁰ nor will I consider Scavenge or Survival as they are standalone gameplay variants with little connection to the series' story. Coop and Versus both have significant input on the story and the players' experience and understanding of human and zombie characters and will therefore form the basis of the following analysis.

5.1. The Game Space

The environment of the *Left 4 Dead* series' campaigns affects narrative and the player's experience of play on an audiovisual as well as a structural level in various ways. These can largely be examined using Henry Jenkins' three functions of game spaces discussed in the chapter on narrative architecture: enacting stories, evocative spaces and embedded narratives. Of course, the effects and experience of game space can not entirely be separated from other aspects of the games and may at times exceed Jenkins' categories, especially when interrelated with other game elements. While the focus of this chapter is the series' space and Jenkins' three spatial functions, other game elements, such as enemy units, will be discussed where they relate to the effects of game space, even when they may be handled more in depth in subsequent chapters. In the following, I will examine the *Left 4 Dead* series' game spaces first as enacted narratives, looking at how game space determines chronology and structures gameplay as players pass through the space. Second comes an examination of the game environment as evocative space, looking at both how the game space remediates cinematic horror and how spatial design choices aim to induce horror or at least unease. Lastly, I will deal with the game space as embedded narrative, showing how the game environment maps

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³⁰ Single Player enables players to play offline with AI team members while Realism removes some player-friendly, but unrealistic interface design choices and makes the game more difficult overall.

the "missing weeks" between the beginning of the outbreak and the start of the game with a particular focus on the use of literary narration in the game.

5.1.1. Enacting Stories

In order to be able to discuss the extent to which the game environment of the Left 4 Dead series functions as a structuring force for its gameplay and narrative, I will first return to and elaborate on Jesper Juul's division of game structures into emergence and progression games mentioned in chapter three of this thesis. Juul himself is of the opinion that it is the category of progression games that is the most suitable for "storytelling ambitions," because "the designer controls the sequence of events" (Half-Real5). While it is certainly true that progression games allow game designers a particularly strong or extensive control over the sequence of events, it is a fallacy to assume by inversion that emergence games afford no control over the sequence of events taking place in the game. Although the question of sequence is not a primary one for the definition of narrative used in this thesis, as a strict sequence of events is not imperative for a fiction to be told in a particular way, it is nevertheless an important element. A complete absence of any type of sequence would make it difficult to impossible for a game to tell a particular story, since there would be no structure to assemble individual events into one. However, the Left 4 Dead series does tell a particular story, one that can be retold in writing as I have done above, and nevertheless features a gameplay with the traits of an emergence game. The emergence game as defined by Juul consists of "a small number of rules that combine and yield large numbers of game variations for which the players must design strategies to handle" (ibid). This is the case for the Left 4 Dead series, where specific rules governing behavior and actions of AI as well as actions of and reactions to player characters combine into a multitude of different possible combat situations. Because the use of qualifiers like "small" and "large" leaves this definition open to interpretation, Juul has devised a simple test to classify game as emergence or progression game, namely checking the nearest available game guide:

If the game guide is a walkthrough (describing step by step what to do), it is a game of progression. If the game guide is a strategy guide (describing rules of thumb of how to play), it is a game of emergence. (*Half-Real* 71)

The *Left 4 Dead* series passes this test with flying colors, but yet it is hardly the "open landscape of possibilities" (*Half-Real* 75) as which Juul describes emergence games. The reason for this is the tight structure in which this emergent gameplay is bound: the game space. While Juul's description of emergence games' "open landscape" has a metaphorical

quality, the series' game space is not just metaphorically, but also quite literally not an open landscape. Perhaps with the exception of the campaigns' finale levels, the game environment constitutes an example of closed corridor rather than open arena architecture. As a result, despite however varied and unpredictable gameplay, the player characters and thereby the players are led along a predetermined path by the designer of the game space, encountering each sight and setting of their travel narrative in the intended order. While the undead population of the *Left 4 Dead* series, including climactic boss encounters, is procedurally generated leading to different encounters at different stages of the journey and is therefore emergent, the environment and the player's progression through it remain fairly static. Unless the game session is abandoned before its intended end, the players always enact the same travel narrative in each individual campaign, from the rooftop in Fairfield to the Mercy Hospital in the original *Left 4 Dead*'s "No Mercy" or from a highway filled with abandoned cars to a concert stage where zombie heads may or may not be smashed in with guitars in *Left 4 Dead* 2's "Dark Carnival." The stories of the *Left 4 Dead* series are concerned less with the "what" and more with the "where" and the question of how to get from one place to another.

The organization of the plot becomes a matter of designing the geography of imaginary worlds, so that obstacles thwart and affordances facilitate the protagonist's forward movement towards resolution. (Jenkins)

The places the survivors visit thereby form what I would call a "core narrative", always presented in the same loose sequence with the same connotations of loss and destruction. In between this sequence of spaces as events are the survivors' encounters with the infected which take place "relatively unstructured" (Jenkins) but not quite as "player-controlled" as Jenkins' view of enacted narrative implies. Players react more than they control, both to the threats they are presented with and the environment they are given to explore, which goes along with the goal of the game: to survive, rather than to perform specific actions.

The players can only interact with the environment in limited ways: they can observe it, wander through it, open and close doors and shoot or hit objects in the environment, such as computer monitors or paintings. In certain areas of a level, the players will find their path blocked or interrupted and must push a button or lever to be able to go forward, triggering an automatic alarm or simply making a lot of noise. These particular spaces of the environment are set up for heavy confrontation with the zombies, mobs of which will rush the players in response to the noise. These confrontational spaces create points of high dramatic tension and thereby also constitute key events in the game's spatial narrative. Although the challenging aspect of these events is derived from the level's enemy population rather than being purely

geographical, they are nevertheless built into the game space in the form of levers, doors and buttons and must be triggered by the players to proceed. This means that they ultimately form part of the environment's overall structure and constitute part of its toolset to set the dynamic tension, mood and pace of the level's narrative progression.

Even where game events are not directly connected to triggers built into the environment, the game space still influences the events taking place in it. Even the more open spaces in the campaigns are replete with nooks and corners from which survivors can be easily ambushed by Special Infected and vantage points that survivor players will most likely withdraw to in order to more easily handle a zombie mob. In certain spaces of Left 4 Dead 2, a particular Special Infected, the Charger, may instantly kill a survivor by ramming him off a tall building or into a lake. Other spaces are designed so that survivors cannot turn back for whatever reason. In Left 4 Dead 2's "Dark Carnival" and also in "The Parish," the survivors must jump through a hole into a tunnel. When all but one survivor have jumped and the last one on the surface is attacked by a Special Infected, the other survivors can do nothing but leave their team mate to a slow death. While these events are not determined by the game space, they are only possible because of the particular architecture of the space in the respective section and therefore specifically enabled by the game space. Even though game events are varied and never entirely predictable, they are not arbitrary and result not only from the actions and/or behavioral patterns available to the survivor and zombie characters, but also from the spatial design.

Moreover, every level of the series' campaigns contains spaces that survivor players cannot reach and often cannot even see, but that are accessible to the zombie population, to zombie AI as well as zombie players. This is done by making walls or other path-limiting



figure 3: a zombie player in a strategic position not reachable by survivor players

obstacles scalable at specific points, allowing zombies to take short cuts and also to attack survivor characters unexpectedly and unseen from above. These "secret" spaces do not only contribute substantially to the startling moments of gameplay, but they also characterize the relationship of survivor and game space and thereby also contribute significantly to the

narrative function of the game space as perceived by the player. Aylish Wood observes that the actions and changes players enact on game spaces in general are often "meant in terms of taking over or conquering the space" (91). The *Left 4 Dead* series' game space defies this conquest: you cannot conquer what you cannot reach. Further, the survivor player (during play) can never wholly make sense of the game space, because they never have a complete view of it. The zombies on the other hand cannot only see but also inhabit these particular spaces, resulting in the game space being stacked against the survivors. Game space in the *Left 4 Dead* series is thus not only a structuring force in the survivors' journey, but also by its very design an alien and hostile place, crucial properties in the conception of the space as horrific.

5.1.2. Evocative Space

When discussing Jenkins' category of evocative space in chapter three, I pointed out that the term can be used also in application to genre rather than to a specific fiction. Where evocative spaces in Jenkins' stricter sense evoke specific fictions by using elements found in them, a space evoking horror does so by calling on the elements shared in horror fictions. In the case of the Left 4 Dead series these elements stem in particular from the tradition of horror and zombie film. The series' strong alignment with the cinematic becomes apparent not just in the audiovisual design of the game space itself, but is made explicit also in the frame built aroundthe individual campaigns, placing the spaces encountered within them into a decisively cinematic context. In his presentation of Left 4 Dead's visual design at the Montreal International Game Summit in 2008, Jason Mitchell refers to the game as "an action movie" (35) to be experienced with friends and this aim of creating a cinematic experience determines many of the series' design choices. The loading screen of each campaign shows a splatter movie style poster featuring the campaign's title with a tagline matching the campaign's setting (e.g. "Dark Carnival's" tagline is "You must be this tall... TO DIE!"). The four survivors are depicted in the foreground with the one-hued setting in the background. In the original game, their names and "actors" are credited on the poster itself next to their likeness in the style of "[player name] as Zoey" or "Francis as himself." In the second game, a line on the bottom of the screen may read "Starring [player name], Ellis, [player name] and Rochelle. In either case, the reference to cinema is explicit and the loading screen immediately calls on the player's knowledge of horror film. This direct reference is repeated at the end of the campaign where a credit roll lists potential dead survivors as "In Memory:" and follows with statistics of the player's performance in the campaign. It ends with the statement "[number] zombies were killed in the making of this film." This use of reference situates the series' within the tradition of (horror) film and thereby also facilitates the immediate recognition and reading of cinematic and genre specific strategies used in the game and particularly in the game space.

The land- and soundscape of the series' game environment aims to evoke both horror film in general and zombie film in particular through the type of locations depicted, their visual design and the items places within it, creating a space that denotes the uncertainty and threat of horror as well as the particular post-apocalyptic flair of the zombie fiction. In his presentation, Mitchell describes a number of "filmic effects" (41) that Valve's game designers applied in order to make the game space appear more like it was lifted from a conventional horror film. This includes the use of dark and desaturated colors and stylistic effects such as film grain and vignette, but also extends into more subtle areas like lighting and the use of environmental factors like fog and rain. Fog is prevalent in virtually all of the original Left 4 Dead's outdoor spaces as well as in some tunnel systems. It is instrumental in creating the shadowy atmosphere of horror films as described in chapter four and, especially in the environment's more open spaces, hinders survivor players' orientation and spatial recognition, leading to the environment appearing less determined and unsafe. The rain, as a film technique the designers borrowed from film noir was introduced to "get that 'movie dark' look" (Mitchell 69) and to introduce "details to dark settings while still feeling dark" (Mitchell 69).



figure 4: an example of the visual design of *Left 4 Dead*'s game space. Note the desaturated colours and atmospheric lighting.

The lighting used in the series has the dual function of establishing atmosphere as well as serving as a navigational aid for the players, who "tend to follow the light" (57), thus needing to fulfill both atmospheric and practical requirements. Especially in the original game, overall lighting is very low-key with all campaigns set during night-time. Diegetic light-sources like fires, street-lights and the headlights of abandoned cars are highly focused with a small radius that may aid player navigation, but also creates additional blind spots and shadows. This is also the case for the survivors' own flashlights, mounted to their guns that light up the space ahead but blind the survivor player to everything else. While Left 4 Dead 2 is overall lighter with many campaigns set in daytime, other environmental factors like burning buildings and monsoon-like rainfalls impact survivor sight and orientation. Additionally to these atmospheric factors, the architectural layout of the series' game environment becomes complicit in restricting the players' visual access to their surroundings. On their path to the campaign's rescue point, survivors have to journey through many dark, narrow and winding passages, adding to the impression of the game environment as a dark and gritty landscape in which there is no telling what may lurk around the next corner. Although the game fiction does not have the affordance of the camera control of cinema to present and conceal the contents of these spaces at just the right moment, the blind spots built into the environment make sure that the players have a hard time of making sense of the space. Due to the series' first person perspective, most of gameplay further becomes one single long take and regardless of how much players turn their camera eyes, they will never feel like they are observing the whole of these spaces.

While the limits of sight introduced to survivor play render the game environment and its contents highly indeterminate to survivor players, diegetic as well as non-diegetic sounds help to render this indeterminateness distinctly threatening. The series' soundtrack is dependent on threat level rather than location, building up dramatically when zombie mobs attack and with particular soundtracks for Boss Infected. Even in a situation where survivor players are not yet in confrontation with enemy units and the campaign's spaces dominate their field of vision, the sounds from the off are quiet, but disconcerting, foreshadowing a coming confrontation. In moments of little confrontation or downtime, the rare silence from the soundtrack raise survivor players' awareness to signs of change and further highlight the diegetic sounds of the environment: the clicking of a car whose alarm may go off and the rasping sounds of lone nearby zombies that survivor players cannot clearly place. Special and Boss Infected further produce their own trademark noises within the diegesis that on the one hand function as a warning system for survivor players, making them aware of a threat close

by, but also serve to put survivors more on edge, when they can hear but cannot see a type of enemy that could potentially incapacitate them. In trying to locate a potential danger before it can attack, every shadow or corner becomes twice as threatening.

These design choices affect the players' perception of the game environment as a horrific place, but it is also the locations by themselves that evoke the conventions of horror and zombie fictions. Left 4 Dead's first campaign "No Mercy" features as rescue point the roof of a hospital, while Left 4 Dead 2 opens with survivor players trying to make it to the local mall in "Dead Center," both of which are among the most iconic settings of zombie fictions. Beyond other imagery from zombie fictions like the highway of abandoned cars (in "Dark Carnival"), a gun store ("Dead Center") and a zombie-infested farmhouse reminiscent of Night of the Living Dead (in Left 4 Dead's "Blood Harvest"), locations in the series also include allusions to other types of horror films. In the original game's "Death Toll," survivors travel through a church and graveyard at night time, alluding to classic horror film plots surrounding the raising of demons and undead. The finale location in the second game's "Swamp Fever" is a crumbling mansion, the archetypical location of ghost fictions. The location with the strongest horrific connotations is perhaps the titular carnival in "Dark Carnival," populated with zombies in clown make-up visually reminiscent of monsters like Stephen King's It. However, the most pervasive type of location is not one that makes direct allusions to some iconic imagery of horror and zombie film, but locations of the ordinary and familiar that have been transformed into post-apocalyptic remnants in the tradition of modern zombie fictions. Throughout both games of the series players are confronted with familiar places such as office environments and malls in an unfamiliar way by showing them ransacked and abandoned. The players' own associations of these everyday places are put in contrast with their in-game depiction as dangerous and inhospitable. Like the horrific creatures that populate them, the spaces themselves are interstitial by showing its trespassers what they were and are no longer, representing both human civilization and its destruction. The office buildings are full of defunct computers, scattered office supplies and mugs with cheesy slogans and the mall contains naked mannequins and advertisements, giving indications not only of what these spaces were, but also of how and by whom they were used before the outbreak of the apocalypse. The game environment achieves its atmosphere of the abnormal precisely through allusions to normality, highlighting its absence and thereby also the threat the abnormal intruders pose to human norms.

5.1.3. Embedded Narrative

As already indicated above, the post-apocalyptic spaces of the Left 4 Dead series do more than evoke the atmosphere of horror or zombie fictions. When they indicate to their players how and by whom they were used before, they also give them concrete plot information. A location's narrative function in the overall story is thus twofold: an atmospheric station within the travel narrative and what Jenkins refers to as an "information space," a space full of plot-relevant content, giving information about what happened before the survivors got there. The locations of the game space are filled with objects like the aforementioned mugs and mannequins that supply narrative information. A room full of desks and computers is recognizable as an office space, while a large hall with shelves and boxes is some sort of storage space. Most of the spaces have clearly been ransacked and blood smears are a common sight, indicating that evacuation efforts have not gone smoothly, or at any case that someone or something has passed through afterward. In some spaces survivors can also see corpses, human or zombie, that tell of the fate of other survivors. In Left 4 Dead 2, the corpse of a "Charger" Special Infected has been strung up underneath a wooden arch in the "Swamp Fever" campaign. This is clearly the work of other survivors, although their motives and their fates are unclear. During the same campaign, players will also encounter a dead parachutist, still stuck between the trees and a woman's body, slumped on the roof of a house next to a pile of ammunition and a weapon. The dead bodies as objects in their final location give players a peak into the story of a survivor who did not make it, hinting at countless other such stories that remain untold. A similar effect is achieved by the introduction of the socalled Uncommon Common Infected in Left 4 Dead 2: regular mob zombies with a campaignspecific appearance. Their particular appearance supplies information about the location's use and history as well as the Uncommon Common Infected's personal story. The clown zombies previously mentioned must have been carnival employees for instance. Some of these zombie groups give more information about the efforts to handle the zombie apocalypse on a larger scale: "Dead Center" features zombies in hazmat suits and "The Parish" introduces armored police zombies. This shows that not only was there a concerted evacuation or threat management effort, but also that it failed, all with using the means of the game space and the objects within it.

While the spatial design and objects described so far supply narrative information primarily on a visual level, the most essential component in the *Left 4 Dead* series' embedded narrative is the use of textual information distributed in the game environment. Along the survivors' escape route and especially in the various safe houses, the players can discover

posters put up by CEDA containing rules, instructions and information related to the outbreak. Some of the CEDA posters have also been tampered with by previous survivors contesting CEDA's instructions and casting doubt on their practices. Parts of the guidelines are crossed out or have notes scribbled on them such as "not airborne" ("Dead Center"). In context with the rest of the game environment, it is evident that CEDA's rules were already openly violated before the survivors' arrival as the always present weapon stash with ammunition in every safe house contradicts CEDA's explicit "no weapons" rule.

Additionally, the walls – once again especially in the safe houses³¹ – are covered in simple permanent marker style graffiti left by other survivors, describing their plans, experiences, thoughts and feelings related to the outbreak and the evacuation procedures. The style of these writings ranges from nearly ubiquitous brief exclamations and one-liners to poems. The "Death Toll" campaign even includes a giant mural consisting of repetitions of "better safe than sorry" written by a madman onto the wall of his hideout in the church, the mural attesting to his mental state as much or more as his vocal statements that can be heard through the safe house door in the previous level. In a manner similar to the official CEDA instructions, these writings are also being contested. One writer's thoughts, ideas or account may trigger several differently voiced comments usually written underneath or around the original graffiti, disagreeing, correcting, mocking or adding to it. For example, a scribble advising to "Move during the day they only come out at night" has been crossed out and commented with "That's vampires moron!!" ("No Mercy"). In Left 4 Dead 2's "The Parish," the issue of immunity and its consequences for the immune are introduced and discussed in a number of interrelated wall writings. Attentive survivor players will learn that their characters, although immune, are still carriers of the disease and therefore risk being shot by CEDA or the military. The written rumors surrounding carriers being shot can be confirmed later on in the campaign if survivor players move close enough to neatly arranged corpses to realize they were humans, not zombies. Interrelated bits and pieces of backstory are thus spread throughout several discrete locations in different levels or even different campaigns. Different accounts and experiences from other unseen survivors as well as from the unseen officials, perhaps still somewhere trying to manage the outbreak, combine with the observations and experiences made by the survivor players in their survivor bodies to form a multi-voiced, fragmented and contradictory account of the games' backstory. The method of textual narration illustrates the difficulties to gain reliable information in the zombie

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³¹ The reason for the safe houses as preferred location for this type of textual information is that here players will be likely most attentive. The safe houses are safe spaces between levels and allow players to examine this type of information at leisure at the beginning of each level without fearing an attack.

apocalypse's aftermath and maps the confusion and fear resulting from this sudden end to civilization. It also further highlights the fragmentary nature of the narration in the game.

The use of text as embedded narrative, fully integrated in the mise-en-scène of the environment is not unique to the Left 4 Dead series, but it is rarely used to such extent. While it brings advantages in terms of realism and uninterrupted gameplay, it can be difficult for players to grasp the information provided. As players read, the gameplay continues and the players remain embodied in their respective characters. They may be attacked, shoved or perform actions themselves while reading and they do not need to perform any specific actions in order to access the written text. The act of reading instead becomes implemented in the act of observing the environment, an act that the players need to perform constantly to proceed in the game space. However, because players' attention becomes divided between the text and other elements in the game, they may not always be able to digest all of the textual information necessary to comprehend the series' backstory. Additionally, many players may simply not be accustomed to scrutinizing the game environment so closely. Because of these drawbacks, many games opt instead for more traditional modes of textual narration as discussed in chapter three. The Left 4 Dead series however manages to compensate for the player's expected inattentiveness by its replayability, afforded by its emergent gameplay. Because players are likely to play each campaign multiple times, it does not matter if they do not grasp all of the available information during an initial playthrough. Instead, the information embedded in the game space is processed bit by bit throughout several instances of playing the game, mirroring the fragmentary dispersal throughout game space in playing time.

5.2. Inhabiting Bodies³²

The *Left 4 Dead* series is at its core a travel narrative: both games tell the story of a journey or quest in the same universe under similar conditions and with the same objective, namely to be rescued. Although the game space thus fulfills the important role of structuring narrative into a cohesive and atmospheric story as described above, travel as a physical act still requires travelers and both the body fiction of a first-person game and the body genre of horror require bodies to convey meaning. As indicated in several instances in the previous chapter the threatening quality of the space stems from being or having been populated by different types of bodies. In fact, the main conflict of the series in terms of gameplay *and*

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³² The contents of this subchapter are in large part also published in the upcoming anthology *Körperlichkeit in digitalen Spielen*, edited by Rudolf Inderst and Peter Just.

story is that the game space has been taken over and transformed by Othered, hostile bodies. Travel in this environment is a thoroughly physical act, not just an exercise of physically moving from one place to another, but also one of protecting the body as vehicle from enemy units, whose aim it is to stop it.

The purpose of this chapter is to examine this dynamic between the identificatory human bodies that need to survive and the interstitial monster bodies that attack them. The question is not only how these different types of bodies interact and experience each other, but also how the players experience their own respective avatar body - whether survivor or infected – and how this body impacts the understanding of and interaction with the game's fiction. As Calleja stresses, experiential narrative exists "in relation to the properties of the artifact that engendered it" (2) and the body as a key collection of properties affects the players' experience in distinct ways. The avatar body in the Left 4 Dead series is not only the player's access to the game and its fiction, but its physicality in the game space is also a fictional component itself. As a result, certain narrative components like the survivors' vulnerability and exposedness or the zombies' Otherness impact the player not merely on an audiovisual level, but on a more indeterminate physical or experiential level. In the following, I will discuss first the "standard" experience of inhabiting survivor bodies and the way that these bodies' conceptualization as identificatory and valuable involves their players on a more direct level in the series' horror narrative. Then, I will move on to the zombie body and its portrayal as Other through the lens of survivor and zombie players.

5.2.1. Survivor Bodies

The survivor characters in each game aim to cover a wide spectrum of potential identificatory bodies, varying visually in regard to race, gender, age and weight. Additionally, each of them is given a distinct personality expressed through the character's looks, facial expressions and vocal statements. However, this variability is restricted to the audiovisual level of each game as all survivor bodies offer the same haptic experience to the player, with identical physical attributes and abilities. While this may appear at first as a problematic oversight, a failure to make difference anything more than a purely cosmetic trait, this haptic homogeneity on the side of the survivors allows the player to experience their bodies as a standard interface for accessing the gameplay. The survivors' individual bodies are deemphasized in favor of predictable, easily internalized controls and the affordance to still play an avatar body that feels like "me," even when the preferred survivor character has already been taken by another player.

Despite this attenuation of physical difference, the survivor bodies' role as physical bodies within the game world is central to the gameplay. Because survivors need to survive, their bodies need to remain intact with a large chunk of survivor gameplay focused on ensuring this objective. This also means that the player's attitude to their avatar matters, since the avatar is not just player embodiment, but also game objective. In his paper on player character engagement, Petri Lankoski writes that a player's "strong allegiance with a PC [player character] is not needed in all cases" (304) and that the "challenges that a game itself presents can make the playing engaging without a positive evaluation of the PC" (ibid.). However, the *Left 4 Dead* series' focus on protecting the human avatar in order to reach the safe house or rescue vehicle, favors a positive relationship between player and avatar to help sustain the player's interest in following such an avatar-centric goal:

When players have a positive evaluation of a PC, it means that the players are more likely to accept the goals the game proposes. (ibid.)

The player's attitude or "engagement" to use Lankoski's term is not generally treated as a narrative component, ³³ perhaps because whether or not a player identifies with their player character is largely up to the player. However, especially in the case of horror, the efforts implemented into game design to make a certain character identificatory or repulsive are highly relevant as the narrative relies on the dynamic of identification and repulsion in order to be horrific.

According to Lankoski, two main interrelated factors are at work in determining the player's engagement with their avatar: empathic and goal-related engagement. Goal-related engagement relates to the congruence between the "regulating goals" (ibid. 297), or the goals the game sets the player to be able to progress, and the personal goal of the avatar as expressed in the game fiction. Empathic engagement depends more generally on the player's evaluation of their avatar's character and functions in a similar way to the evaluation of characters in other fictions. In other words empathic engagement entails how we see and judge our avatar as a character. *The Left 4 Dead* series uses both of these factors to depict its survivors as identificatory and thereby posits them as a counterpart to the infected and their threatening Otherness.

Key for the player to form an empathic engagement to their avatar body is that the player character is "portrayed as having characteristics that the player can value" (ibid. 304). On the survivor side of the *Left 4 Dead* games, the possibility of any given player finding

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³³ Calleja certainly comes very close to it by focusing on the narrative impact of the type of player embodiment in a game (first person, third person or entity). However, the player's own attitude to these embodiments as characters is not considered.

characteristics in their avatar that they can value is increased by giving the player the option to choose their avatar among the four available survivors, picking one that appeals to them the most. Here the series' basic gesture towards visual diversity becomes relevant: a player may choose a survivor character whose gender, race and age most resonate with them. Additionally, each game has characters that gravitate more towards being cynical and others that are more upbeat. For example, Francis and Nick like to complain and both seem to be to some degree shady, Bill in his soldier outfit stays levelheaded and strategic, Coach generally positive and neighborly and Zoey sometimes downright lighthearted. Some characters also exhibit particular tastes, such as Francis with his tattoos and Rochelle with her Depeche Mode t-shirt. Players are thus given a fairly large range of characteristics they may identify with, making it at least probable that they will be able to relate to the avatar of their choice on some grounds.

The allegiance between player and chosen survivor avatar is further strengthened within gameplay, where the player does not only support the avatar by steering him towards the next safe house, but the avatar also supports the player by making them aware of items or situations within the game environment. As mentioned in the previous chapter, campaigns feature several key locations in which players have to perform specific actions (for example, disabling an alarm or refueling a generator) in order to progress. In these events, the survivor characters provide the exposition needed for the player to understand what to do in a brief conversation among the survivors or an instructive statement from one survivor to the others:

Ellis: "So I been thinking. Jimmy Gibbs's stock car's around here somewhere. We just gotta find it, gas it up, and I'll drive that thing to New Orleans my damn self." Rochelle: "Well...it's a plan. I don't know if it's a good plan, but it's a plan." (*Left 4 Dead 2*, "Dead Center")

These progress-related conversations serve two functions in regard to the relationship between player and avatar. Firstly, the survivors demonstrate that they are concerned with the same issue (how to progress) as the player and are actively engaged in tackling it, thereby indicating support of the player in their task. Secondly, by giving the player relevant information, they become a direct asset to the player in a form that is not under the control of the player themselves. This has the effect that the player is more likely to see the survivor avatar as intrinsically valuable, rather than being made aware of their avatar as character only in states of weakness, such as critically low health, which would arguably lead to a more negative evaluation. Survivor characters may also take up this supportive or advisory role in other instances during gameplay: they point out weapons or other items on the ground, they interpret sounds caused by Special Infected in their environment, advice players to turn off

their flashlight when encountering a witch³⁴ and suggest that other survivors heal themselves. These statements all serve the function of aiding the player in the case that they themselves miss a clue in their environment.

In other instances, the survivor characters may even downright take their players' side. When survivors are hit with friendly fire – bullets shot or melee weapons swung by the other survivors – their reaction is much closer to mimicking the player's probable reaction than to any credible reaction of being shot. When survivors take damage from zombies, they react with cries of pain or at least discomfort; when they take damage from fellow survivors, they generally react with anger or irritation, no matter how damaging the friendly fire. While some of the reactions indicate some level of pain (Zoey: "Hey! That hurt!"), most express indignation (Louis: "Hey man, that's not cool."), outrage (Coach: "Oh, excuse me? Excuse me!?"), threats (Francis: "Shoot me again, and I'm gonna kick your ass!"), insults (Nick: "You suck at shooting.") and mockery (Rochelle: "Try shooting some damn zombies.") along with several iterations of "it's not funny anymore." These responses indicate that to the survivors friendly fire is not a potentially life-threatening situation (despite the fact that it can in fact kill them), but an annoying and counterproductive mistake made by others. This is in line with how friendly fire is experienced by the player, who is not physically hurt by the attack, but nevertheless inconvenienced by another player's mistake. The survivor characters complain about the incident for their player, relaying both the information itself as well as the probable annoyance at the fact, thereby indicating once again that they have similar concerns as their player.

These similar concerns that survivor characters and survivor players share derive largely from the fact that they share the same ultimate goal and thus relate to each other also in terms of goal-related engagement. Although the *Left 4 Dead* series certainly devotes considerable effort to making the survivor characters' function as allies explicit, particularly through speech, this usefulness ultimately stems from their desire to reach the next safe house, and finally the rescue vehicle, thereby attempting to meet the regulating goals of the *Left 4 Dead* games. When playing any campaign on the survivor side, the regulating goals of players will be perfectly aligned with the survivors' own goals, facilitating empathy:

Shared goals are a mechanism for empathy, as goals and goal-status evaluations correlate the affects of the player with the PC. (Lankoski 299)

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³⁴The witch, one of the series' two Boss Infected, is the only zombie that attacks only when she is startled by bullets, close movements or light. When startled, she will attack the guilty survivor, incapacitating them with only one hit, making it thus often the safer option to simply sneak around her.

In order to meet the regulating goal of reaching the rescue vehicle at the end of a campaign, a player must generate and meet key subgoals – "goals that are inferred from more generic goals, such as the regulating goals of a game level" (ibid. 297) – that also largely coincide with the personal goals of the survivor.

First and foremost, in order to reach the campaign's end, the player must ensure the physical integrity and health of their avatar body. Any loss of health can put the attainment of the goal at risk. If a survivor loses two thirds of their maximum health, they begin to limp, giving zombies more time to attack and making it harder to keep the survivor group together in moments of crisis. When the avatar body's health goes down to zero, it becomes incapacitated: pinned to the ground with a secondary, depleting health bar, still exposed to zombie attacks and only able to defend with low-damage pistols. Unless a fellow survivor revives the incapacitated survivor, they die. During the revival span, both the survivor reviving and the one revived are completely exposed to zombie threats, thereby putting more strain on the remaining survivors. If a survivor becomes incapacitated multiple times without healing, they only regain little, temporary health and upon its depletion, die. If a survivor dies in the standard campaign mode or in versus, they may still be recovered later in the level from a rescue closet if the remaining players progress far enough without them.³⁵ In Left 4 Dead 2. they may also be reanimated with a defibrillator if available and equipped by any survivor. As in the case of incapacitation, this puts a strain on the group as a whole, making progress less likely in any of these events.

With the avatar body's health as the player's primary and endangered resource, the player will generate the further subgoal of avoiding damage to this body whenever possible. This means, that the lower the avatar body's health, the higher the player's stress level and sense of urgency for finding either health or reaching the end of the level. This stress and fear of character death is also echoed by the survivor characters, who begin to wish for health kits (Rochelle: "I need to find some health.") or worry about dying (Bill: "If I go down, don't let those bastards eat me."), which in turn further reinforces the player's worry and sense of urgency.

Unlike in many other shooters but similar to games in the genre of survival horror, killing enemies is not a regulating goal of the *Left 4 Dead* series, but rather a subgoal, generated from the player's desire to keep the avatar body save. The player does not directly

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³⁵Realism mode takes this survivor vulnerability to an extreme conclusion and removes a dead survivor from the game until the end of the level.

gain anything³⁶ from killing a zombie, so killing zombies becomes simply a means of risk elimination. The subgoal of avoiding damage to the avatar body, as well as the lack of incentive for killing zombies for its own sake affect the attitude players develop towards the zombie threat. While traditional shooters encourage their players to seek out and destroy enemies, the *Left 4 Dead* series configures zombies as a permanent threat to the player's goal attainment, slowly wearing down avatar health. With the zombie enemy thus being primarily associated with a threat to progress instead of with a possibility for reward, the player fears the zombie as a risk, instead of welcoming it as an opportunity:

An important feature of goal-related emotions is that they are real and personal. Emotions relate to the player's own goals and choices. Hence, players can, for example, be afraid of a NPC in the game because the NPC threatens a goal that the players themselves value [...]. (Lankoski 298-99)

Fear of the zombie aligns the player emotionally with the survivor characters and it also transplants the narrative function of the zombie as horrific creature to the level of gameplay, making players fear zombies not only because of what they are, but also because of how they can impact their avatars and goals.

While each zombie attack can potentially become a risk to the player's progress, the abilities of Special Infected are designed to interfere with or sever the connection between player and avatar body. Of the three original Special Infected established in *Left 4 Dead*, only

the Boomer does not entirely interrupt the player's control of their avatar for the duration of their attack. The Smoker catches the survivor with a mutated tongue, pulling them #56

away from the group and strangling them.

figure 5: The Hunter pounces on the player's avatar Louis. The player's view shifts to third person.

The Hunter pounces on the survivor and pins them down. In both cases, the player can no longer control their avatar in any way, until they are rescued by a fellow survivor. During the

³⁶ Additionally to listing the zombie kill count at the end of a campaign, like many modern games the games contain achievements of which many necessitate killing certain zombies. However, the player gains no advantages within the game for killing anything, nor does the game include a scoring system during play.

attack, the camera shifts to third person, accentuating the player's loss of control and impotence when deprived of "their" avatar body. Not only does this transition happen very suddenly in a manner reminiscent of a shock cut, but the forced disengagement of player and avatar body is also a form of "violent rupture in the diegesis" (Diffrient 53), mirroring the visual shock with an experiential one. However, the switch to third person perspective also allows the player to distance themselves from the violence enacted on the survivor, allowing them to take the place of a spectator, rather than being directly involved. The Boomer does not take control of the avatar body, but still interferes with its physical abilities by vomiting zombie-attracting slime onto the survivor that covers the avatar body's field of vision with a viscous film through which the oncoming attack can hardly be seen. While this does not render the player similarly impotent as the attacks of Smoker and Hunter, the player nevertheless suffers the loss of a vital physical ability, namely sight. Of the three additional Special Infected introduced in Left 4 Dead 2, only the Charger has a similarly disempowering attack as the Hunter and Smoker: it grabs a survivor and hammers them into the ground. The Jockey "rides" the survivor and still allows the player minimal (and insufficient) resistance³⁷, while the Spitter does not attack the player/avatar link at all and simply damages the survivors with acidic spit. A likely reason for the new Special Infected's less intense assault on the survivor bodies is that too many such debilitating attack abilities would shift game balance to the zombie side. In any case, the inclusion of these new Special Infected does not appear to alter the survivor players' attitudes toward Special Infected as a potential game ending threat.

However, no matter how gruesome the visual display of violence, the survivor takes no permanent physical damage, such as disfigurement, in these attacks and can always be restored with health items. Even when they are reanimated with the defibrillator after dying in *Left 4 Dead 2*, survivor bodies do not suffer any effect other than having restored only half of their health bar. It is especially this easy and consequence-free recovery from death that makes the survivor bodies appear vulnerable, but ultimately incorruptible and thereby continually identificatory. Even in death, after having been brutally clawed to death, survivor corpses remain in one piece, ready to be resuscitated and reappear in the game space as good as new. The avatar body of the survivor is a valuable and vulnerable asset that needs to be protected against an overwhelming force, but when the player fails in this task and violence is enacted upon it, it nevertheless never ceases to be read as "me."

³⁷ As with the Smoker, Hunter and Charger attacks, the player sees their avatar in third person. The only difference is that during a Jockey attack, the player may use the directional buttons to counteract the Jockey's influence.

5.2.2. Zombie Bodies

While the survivor player primarily conceives of the zombie body as a threat to their "own" avatar body, they do not view it exclusively in relation to their own survivor bodies as they also encounter it as its own object or figure within the game space. Viewed through the standard lens of survivor play, the zombie as body is essentially the antithesis to the body of the survivor. Where the survivor body denotes incorruptibility and wholeness, the zombie body, as in most zombie fictions, denotes mutation and decay. All Special and Boss Infected are visibly mutated and deformed to a degree where they only distantly resemble human beings. The Common Infected or mob zombies are more humanlike, but their grayish skin, empty stare and blood-spattered attire gives them the unmistakable appearance of walking corpses. Common Infected can further be mutilated in multiple ways, lose arms and legs while attacking and have their head cut off their body before falling to the ground. This active mutilation on the part of the survivor's is similar to gore in horror film: it banishes the zombie body from abject to object and reassures survivor players that they are not killing representations of people. Further, while there are only four survivors³⁸ the Common Infected attack largely in mobs or hordes of many disposable bodies, thus marking the worth of one individual zombie body as fairly low and an ideal, albeit disturbing and horrific enemy figure.

The series' versus mode complicates this relationship to the zombie body by enabling zombie play. In versus mode, two teams take turns playing the respective game's survivors and the Special Infected for the duration of one campaign. While the relationship between player and survivor facilitates and even requires empathy, empathy towards a zombie would entirely defeat its purpose in any horror fiction. Zombies as interstitial, abject creatures are by definition unrelatable and "radically excluded" (Kristeva 2), thereby as far outside of the range of empathy as can be imagined. While the series successfully depicts the zombie body as horrific during survivor play, the zombie gameplay must be enable the player to relate to the zombie body in some fashion as they must inhabit and move this body to oppose the survivor team. The player must be willing to play the zombie body in order to enjoy playing a Versus game, but at the same time the player cannot and should not identify with the zombie body. This is not only because of its general horrific qualities but because identification with the zombie body while playing on the zombie side would undermine the sense of fear generated by the zombies while playing on the survivor side. The player must therefore find a middle ground in which they do not regard the zombie avatar as a character nor a threat and

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³⁸Other survivors do sometimes interact with the four main survivors, but they do not appear visibly in the game, that is as objects within the game space. Instead, they exist primarily as sound files, although in some instances a player may be able to briefly see the other survivor's body mesh.

are willing to use the zombie body for the sake of the advantages it offers. In its conception of the versus gameplay mode, the *Left 4 Dead* series enables the player's access to the zombie bodies in a way that encourages them to distance themselves from and objectify these bodies, configuring the Special Infected more as tools encountered than as characters chosen.

Like the process of identification in the case of survivors, the process of distancing begins with character assignment. When playing on the zombie side, a player may not choose the type of zombie they would like to play, at most being able to select "Infected" (as opposed to a survivor character) from the game's lobby. When the game begins, the player finds themselves embodying a randomly selected Special Infected that they must now put to use until it dies. Because the Special Infected bodies have much lower health than their survivor counterparts, this may happen rather quickly. After a short respawn time in which the player can only participate as a spectator, the player is assigned a different randomly selected Special Infected, thus actively discouraging the player to form an empathic bond to any specific zombie. Rather than being allowed to play the desired zombie at the desired moment, the player is instead lead through a virtual chamber of horrors, having to make use of the zombies differing abilities as they come.

Zombie players do not see their entire avatar body until the moment it dies and they disengage from it. Nevertheless, the avatar body's hands, revealing the body's overall deformity, are always present within the frame (see figure 3), providing a constant, unsettling reminder of the abject body the player controls, encouraging the player to regard their avatar body as "it" more often than "me." The visual deformity of the Special Infected body further expands to the experience of inhabiting it. Zombie bodies feel and react differently to survivor bodies as well as to each other and also perceive the game environment differently. When playing a zombie, the player will see their environment in distorted colors, will not be inconvenienced by darkness and shadows and, depending on the type of Special Infected, will see the environment from a lower or higher viewpoint relative to the survivor's "standard" viewpoint. Because the game graphics are generally held in a "realistic" style, the zombies' changed vision is perceived as an aberration from the norm and therefore as unnatural and Other. Because of their differing special abilities, all Special Infected bodies move in ways unique to them, some – first and foremost of them the Boomer – are slow and cumbersome, others are fast and jerky. The Hunter can cover great distances very fast by jumping, the Jockey moves very hectic, the Smoker becomes momentarily stunned when its attack is interrupted. These physical properties do not align with human movements and are thereby

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³⁹ By contemporary considerations and technological abilities

outside of the player's carnal knowledge, making them unable to relate to the type of movement. Embodying any Special Infected feels different and therefore alien. Since the player cannot select a Special Infected and thus does not know what they are playing next, they cannot mentally prepare themselves for the experience. Each new zombie body entails a moment of strangeness and discomfort and requires the player to (re-)familiarize themselves with the avatar body, thus keeping the zombie body within in the realm of the Other.

Where survivor characters aid players with their vocal statements, zombie bodies demonstrate their non-allegiance by downright sabotaging the player in their attempt to cause maximal damage. Zombie bodies require more skill to employ effectively due to their differing abilities and will therefore feel to some degree unwieldy compared to survivor bodies. They also make a series of disconcerting or disgusting noises that firstly serve to alienate the zombie player from its body by making it difficult for them to associate themselves with the source of the noise. Secondly, these noises also inform the survivors of the Special Infected's presence, giving survivor players a clue towards their adversaries' whereabouts. Sneaking up on unsuspecting survivors becomes therefore significantly harder through no fault of the player themselves. The culprit is solely their non-complying avatar-body. With the zombie body's behavior thus occasionally contrary to the player's interest, the player cannot be expected to feel empathy for the zombie or even simply pity at its death.

The zombie player's dissociation from their avatar body is also apparent in regard to goal-related engagement, as the gameplay is not designed to facilitate any sort of emotional connection between player and zombie avatar. The survivors are the heroes of their own story. Even in versus mode, the narrative focus is still heavily geared towards the team currently playing on the survivor side. While the survivors' goal is to reach the next safe house without casualties, the opposing team's goal is simply to stop them or to inflict maximal damage on them – their success entirely equated with the other team's failure rather than any ambition of their own. Neither zombie player nor zombie have any desires nor interest related to the zombie bodies themselves, their entire focus put on the bodies of the survivors. While it could thus be argued that the player's and the zombie's ultimate goal align – namely: destroy the survivors – their subgoals would still differ. If the zombies can be considered to have any goal whatsoever, given their lack of conscience, it will surely relate to killing and eating the survivors. Regardless of the fact that survivor bodies cannot be eaten within the game, the zombie player begins an attack not necessarily with the set goal of killing a survivor, but simply of weakening them in the long term. As mentioned above, Special Infected bodies have lower maximum health than survivor bodies, making the survivor much more likely to

win in most initial conflicts. The zombie player can therefore not reasonably expect their zombie avatar to kill the survivor at full health, nor can they always expect to damage the survivor and get away. The zombie player thus deliberately sacrifices their zombie avatar in exchange for inflicting damage on the survivor and subsequently waits for their next avatar body to attack again. This playing style commodifies the zombie body and disregards any possible goals the zombie may have on its own. Goal-related engagement becomes impossible on the grounds that the zombie is not perceived as a creature that can have goals.

As a result, where the survivor body is conceived as a character, the zombie body is seen as an item. This is reinforced by the fact, that the resourcefulness of each Special Infected is limited to one specific type of attack, grounded within their body. When playing survivor, players may choose among a number of weapons for their avatar and exchange them at their leisure for other weapons found in the game environment. While survivor avatars can therefore use different weapons for different playing styles, the zombie avatar *is* one specific weapon deployed for one specific purpose.

As a commodity and disposable weapon, the worth of the zombie body is not only low from the survivor player's perspective, but from the zombie player's as well. Violence is inflicted on the Special Infected body both by the survivors who defend against it as well as by the zombie player who willfully destroys it. When the zombie body dies, the player immediately discards it as avatar, seeing its limp, deformed body collapse in third person perspective for only a brief moment before switching into spectator mode. Conversely, the camera lingers for a few moments on the dead, but still physically intact, survivor body. While the survivor body is never lost completely, returning at the latest in the next level, the zombie body is spent and destroyed at the moment of its death, not to return but to be exchanged for something else. Although most Special Infected bodies also remain intact, that is in the same shape they were before death, they were already deformed from the get go and therefore at no time denote wholeness or physical integrity. The Boomer even explodes at the moment of death, leaving only its lower half – a pair of wobbling legs – behind, thereby violently banishing it to the state of object, unrecognizable as a body of any kind. This further strengthens the perception of the zombie body as a site for physical violence on both sites of the playing field. The survivor body conversely becomes the focus of gameplay on both sides, either with the aim to protect or to destroy, leading to both zombie and human player evaluating their performance and projecting their desires onto the state of the survivor body.

5.3. Expressive Processes in Play

The narrative components discussed in both of the previous chapters rely – despite the more data-heavy approach I have taken to them – at least as much on governing processes as on the data that represents them on the surface level. The music that is so instrumental in generating the game environment's atmosphere is procedurally generated, as is the reflection of light and shadow as the player moves and the trajectory of objects or zombie body parts that are flung around in this environment. The vocal statements that ally survivor characters with their players are selected from a number of event-appropriate responses in a process similar to that described by Wardrip-Fruin in regard to Fable. The players' relationship to their particular avatar body and the actions they perform with these bodies derives directly from their understanding of the processes that govern gameplay: they learn that the response to Special Infected death is a speedy respawn in a new body, while a dead survivor is entirely at the mercy of their living team mates and then use these bodies accordingly. The results of these actions is then also implemented through processes: processes compute the trajectory of the survivor's bullets or the Spitter's acid projector as well as whether or not it hits something for how much damage; processes also measure the proximity of survivors to the witch and the amount of light directed at her and compute whether or not she is startled. In all of these examples, processes contribute to the narrative presented to the player in significant ways. Not all of them can be discussed in this chapter.

From a position outside of the game development team, it is next to impossible to assess just how most of the individual processes in the wealth that make up the two games interrelate and contribute to the narrative accessible to the player. Even where such assessment is possible, an exhaustive analysis would necessitate a research undertaking in its own right and defy the holistic aim of this thesis. Further, for the scope of this thesis, it is not always necessary to fully examine the processes involved in the generation of a narrative element. For example, in order to examine the narrative impact of survivor speech, a thorough understanding of the logic responsible for selecting the event-appropriate response is not essential. It is sufficient to understand that it occurs, that the responses are event-specific and to know which responses can occur during which event. While the procedural nature of survivor speech is certainly relevant in showing that speech functions in a dynamic, not sequential or arbitrary narrative structure, the main focus of its narrative impact, at least for the purposes of this thesis, lies on the data level and is concerned primarily with the sound files played rather than the algorithm that plays them.

In this chapter, I will instead examine a comparatively small portion of the expressive processes to be found in the *Left 4 Dead* series with a specific focus on the respective processes' contribution to the generation of horror. How is horror expressed not just through audiovisual or data-heavy but through procedural means? To answer this question, I will in the following concentrate on two aspects of the game in which the procedural influence on the feel, pacing, events and actions performed in the game becomes particularly visible. The first part of this chapter deals mainly with the logics present in both games that control the enemy population and distribution of usable items in the game environment. This "collection of systems" (Booth, "AI Systems" 55) is referred to by Valve as the "AI Director" (ibid), a name that further underlines its expressive function. In the second part, I will expand on some elements discussed in the previous chapter and examine how certain gameplay governing processes affect player behavior and encourage behavioral patterns that suit the fictional world of the series as well as replicate genre conventions of horror.

5.3.1. The AI Director

The AI Director's main purpose in the series' gameplay is to create "structured unpredictability" (Booth, "AI Systems" 55) in the threat and boon situations the survivors encounter. It is responsible for generating the enemy population in a level and to place the items players need to combat them. According to Booth, the primary aim behind the creation of the AI Director and the concept of structured unpredictability is to "promote replayability" ("AI Systems" 51). The procedurally generated threats ensure that even experienced players can never fully anticipate the threats ahead of them, making sure gameplay remains a "skill challenge instead of a memorization exercise" (Booth, "AI Systems" 53). The variability in the enemy population prevents the players from learning and growing bored of a level, thus making it more rewarding to play the same level/campaign multiple times even on the same difficulty level. The resulting unpredictability does however not only serve the practical function of keeping the players interested, but further fulfills the narrative role of the unknown or unknowable threat looming ahead in horror fictions.

Items that the players can use, such as weapons and first aid kits, are placed by the AI director within the game environment in eligible locations. The map designer specifies possible locations in the level in which either weapon caches (primary weapons and ammunition) or scavenge items (secondary weapons, throwable weapons and health items) may be placed (Booth 75). When the level is loaded, the AI Director "chooses which groups actually exist" (ibid) among the possible locations. This system of distribution still leaves the

control over placement largely to the designer and results in a very limited amount of places comparative to the size of the environment, in which items can actually appear. Booth argues for this largely designer-controlled placement with the practical gameplay-related consideration that for the survivors, the "prediction of possible locations [is] beneficial in this case" (ibid), but also points to issues of "visual storytelling/intention" (ibid). A point in case is the human corpse found on the roof at the end of the "Swamp Fever" campaign: for storytelling purposes, it makes sense for a weapon cache to spawnnext to the corpse with a high probability in order to complete the impression that the woman in question has gone down fighting. The designer's choice ensures that items appear in likely places, such as on tables, shelves, in gun racks or next to corpses, rather than strewn randomly across the floor. In a way, the designer's job is to disguise the work of the algorithm and to make items appear as if a human could have put them there. Despite the map designer's impact on the item placement, the AI Director's selection process retains a degree of uncertainty. In fact, the player's knowledge of likely places for needed items may even further the build-up of anxiety as the player's hope for aid grows the closer they get to a likely destination in order to be either crushed or rewarded. It is not unlikely that a player will at some point find themselves in sore need of either ammunition or health items as their initial supply is limited. Because they cannot know which, if any, items they will find ahead, they have little means of managing their resources effectively, which in turn gives them little control over their own situation and leaves them at the mercy of a hostile environment. When close to death, approaching a likely place for first aid kits may either mean salvation or doom.

The processes at work for generating zombie population are however much more complex than those responsible for placing items and have to be. The question of whether or not there will be a weapon cache on the table inside the next building suffices to introduce significant tension, whereas the same question regarding a Special Infected for instance would only result in players preparing for the event in any case. For the zombie population to remain a threat to survivor players even after multiple play sessions, they need to be more thoroughly unpredictable than the appearance of items.

Rather distribute the zombie population dynamically, the AI Director makes use of an "Active Area Set" or AAS (Booth, "AI Systems" 59) that consists of a "set of Navigation Areas surrounding the Survivor team" (ibid). In other words, the AAS is made up of a portion of the level's overall corridor layout located around the survivors' current position and follows the survivors' movements through the level with the areas behind the survivors being literally left behind as new spaces ahead of them become active. The AI Director then creates

enemy units within the bounds of the AAS and deletes surviving zombies from areas that have become inactive. This means that firstly the AI Director needs less computing space to manage enemy units and "allows for hundreds of enemies using a small set of reused entities" (ibid). Secondly, the created enemy units can swiftly come into contact with the survivors, leading to a dynamic that relies heavily on the AI Director's placement practices and cannot be significantly altered by the survivors' movement speed, backtracking or other actions. The AI Director thus allows a tight control over the dynamic of play and can be used to control or influence narrative elements like pacing or the perception (or feel) of the zombie population within the fiction.

The AI Director creates several different types of enemy units within the AAS: Boss Infected, Special Infected and two differently-behaving groups of Common Infected. Wanderers are "Common Infected that wander around in a daze until alerted by a Survivor" (Booth, "AI Systems" 65) and Mobs describe "a large group (20-30) of enraged Common Infected that periodically rush the Survivors" (ibid). Wanderers are spawned, or created, ahead of the survivors whenever "an area enters the AAS" (Booth, "AI Systems" 66). The amount of Wanderers spawned per area is "randomly determined at map (re)start based on Escape Route length and desired density" (ibid), thus appearing in always slightly varying amounts in different locations for each playthrough. Because they are dispersed and inattentive, Wanderers do generally not pose a significant threat to the survivors but may occasionally startle unaware survivors, especially in dark locations. Their primary narrative function seems to be not so much to induce fear, as to make the space appear thoroughly populated and taken over by the zombies. Because survivor players encounter enemy units dispersed through almost every space they enter, they are more likely to evaluate the environment as overall hostile. New players will also immediately understand that the disease management efforts of the fictional authorities have failed with so many zombies casually walking about. Mob zombies then appear "at randomized intervals" (Booth, "AI Systems" 68), which on normal difficulty means every "90-180 seconds" (ibid). As mentioned in previous chapters, Mobs also appear whenever the Boomer succeeds in vomiting on a survivor and in certain set locations in response to an action that survivors must perform. Because Mobs appear regardless of player actions, through their use the AI Director can produce a dynamic sequence of activity, comprised of frequent enemy contact even where players may dawdle behind. It also ensures a degree of consistency in narrative throughout multiple play sessions without resorting to a fixed sequence narrative structure. Even though the individual interactions between zombies and survivors vary slightly for every encounter,

the story of survivors' fight for survival is always told in the same environment with frequent encounters with the various types of zombies. The continuous reappearance of zombies at semi-irregular intervals further creates the impression of the zombie population as a relentless and unstoppable threat and makes the Common Infected threatening beyond their easily dismembered bodies. Mobs are not only threatening in a particular instance, but also on a conceptual level because they continue to appear and render the environment permanently unsafe until survivors have reached the safe house.

Special and Boss Infected are also spawned in accordance with conditions designed to make the game more unpredictable and replayable as well as make the encounters with the survivors thematically and narratively consistent. Special Infected are "created at individually randomized intervals" (Booth, "AI Systems" 69) and, where AI-controlled, 40 are spawned in locations "appropriate to Special's class" (ibid). As one example, Booth mentions the Smoker Special Infected that "attempt[s] to select areas above the Survivor team" (ibid) as a spawning point to be able to more effectively fulfill its gameplay and narrative function of pulling unsuspecting survivors away from the team. Boss Infected are distributed through "Boss events" (Booth, "AI Systems" 74) that are put in an arbitrary, non-successive order and "positioned every N units along "escape route" +/- random amount" (ibid). These events are "Tank, Witch and Nothing" (ibid). Boss encounters are therefore bound to happen numerous times during a campaign (even on low difficulty) and thus constitute integral events in the campaign's story. Nevertheless, players can never fully anticipate when and if there will be a Boss Infected until the particular Boss Infected's trademark music begins playing and/or players hear the Infected's movement or other noises. Exceptions for this are each campaign's finale, in which Tanks will always appear and a few set locations in which a certain Boss Infected will always appear due to specific narrative considerations. In the campaign "The Sacrifice" for example, survivors will find a Tank that has been locked in a shipping container. These exceptions notwithstanding, Boss Encounters are generally written into the game as climactic encounters along the survivors' journey that still retain the ability to startle or even terrify survivors in line with their narrative function.

While all these systems governing the spawning of AI enemy units and items are relevant to narrative in and of themselves, the AI Director's biggest impact on the series' narrative, especially in regard to pacing and mood, is its use of these systems to achieve what Booth refers to as "dramatic game pacing" ("AI Systems" 77). This means, that rather than

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⁴⁰ Player-controlled Special Infected are still to some degree affected by the AI Director's operations (for example regarding respawn times), but places to spawn and subsequent actions are chosen by the player.

determine the pacing of a campaign or the series overall entirely through preset information like spawn intervals or location-bound events, the AI Director uses an algorithm to measure the assumed "emotional intensity" (Booth, "AI Systems" 79) of the survivors and alters or suspends the creation of enemy population accordingly. The goal is, according to Booth, to "maximize 'drama' (player excitement/intensity)" ("AI Systems" 78), but beyond furthering players' engagement within gameplay, dramatic game pacing also ensures that the series' story is conveyed with genre and event-appropriate pacing through procedural means.

The rhythm or pacing of gameplay is divided into the four phases "Build Up," "Sustain Peak," "Peak Fade" and "Relax" (Booth, "AI Systems" 81), each of which is activated depending on the AI Director's assessment of the players' emotional intensity. The intensity is measured for each individual survivor according to their encounters (or lack thereof) in the game. Emotional intensity is represented in the game systems "as a value" (Booth 80) that is increased by specific, preset amounts whenever certain events take place that can be assumed to increase survivor players' stress during gameplay. Booth lists the following events for increasing a survivor's emotional intensity:

- •When injured by the Infected, proportional to damage taken
- •When the player becomes incapacitated
- •When player is pulled/pushed off of a ledge by the Infected
- •When nearby Infected dies, inversely proportional to distance ("AI Systems" 80)

Whenever survivors are not being attacked by any enemy units, their emotional intensity decays "towards zero over time" (ibid). As a result, survivors that easily master the challenges in a level without becoming hurt or incapacitated have their emotional intensity increase at a much slower rate than survivors that are quickly overwhelmed and struggling to complete a level. This in turn allows the AI director to adjust the pacing accordingly and regardless of other difficulty settings, thereby ensuring a similar mood and emotional experience for players with varying skills and experience. During the "Build Up" phase, the AI Director continuously spawns a "full threat population" (Booth, "AI Systems" 81) until the survivors' emotional intensity crosses a set "peak threshold" (ibid). In teams where emotional intensity rises more slowly, a full enemy population is maintained for a longer period, compensating for the team's skill with more frequent attacks. "Sustain Peak" continues like the "Build Up" phase "for 3-5 seconds after Survivor Intensity has peaked" (ibid) to ensure a "minimum 'build up' duration" (ibid) even where survivors are quickly overwhelmed. During "Peak Fade" the AI Director then spawns only a "minimal threat population" (ibid) and the phase continues until the peak enemy encounters have played out. During the "Relax" phase, the AI Director creates a minimal population for another "30-45 seconds, or until Survivors have traveled far enough toward the next safe room" (ibid). Here again, too experienced or skilled teams will be penalized for making too much headway during the "Relax" phase and encounter additional enemies to compensate.

While the AI Director does not create identical encounters during every playthrough and therefore does not enable an identical chain of events for every experience of the game fiction, it creates a consistent rhythm of enemy encounters. This ensures that diverse players will experience the game fiction in a similar manner even when they do not experience the exact same events. This further underlines the particular ability of procedural fictions to adapt to their audience. An experienced audience of horror films for instance will be less likely to be shocked or horrified by any given horror film than an audience less accustomed to the genre. As a result, less extreme horror films will often fail in their purpose to horrify these viewers, leading Schneider to argue that "only a small number of films [...] have actually succeeded in horrifying a significant number of audience members" (133). The procedural means of creating pacing and mood used in the *Left 4 Dead* series however have a better chanceof making even experienced and skilled players feel threatened and overwhelmed. The series thus uses game-specific narrative tools to create and maintain atmosphere and pacing.

5.3.2. Procedural Rhetoric

Above I have described processes that operate as tools for story-telling outside of the players' control or influence. These processes determine to a large part which actions and events take place and how they shape the overall experience of the series and its story. However, as Wardrip-Fruin points out "one of the primary design challenges lies in helping the audience understand certain processes" (45), so that players are able to determine that and how their "actions can effect these processes in particular ways" (ibid). In other words, players do not only act according to their own desires in the game space, but respond to their reading of the game's processes in order to win. Although they are not directly controlled by game processes, they are nevertheless cued into taking certain actions and adopting specific behavior that, like the behavior of the AI, constitutes a narrative element. The series' procedural influence on player behavior is of course not nearly as deterministic and straightforward as in the case of AI and while it cannot force specific player actions, it can encourage players to act within the confines of the intended narrative progression through procedural means.

In the following, I argue that the *Left 4 Dead* series employs procedural rhetorical devices to structure player behavior in accordance with the game fiction and to increase the

players' understanding of the game world and "their" survivor characters. In the chapter on inhabiting bodies, I have already shown how the players are taught to regard the survivor body as a valuable resource through procedural means. If a player does not protect this resource sufficiently, it is destroyed and the player loses the game. This does not only create a threatening atmosphere, but it also allows the player to understand the survivors' situation on a direct, more personal level. Because they share the survivors' struggle, they are more inclined to act as a survivor would be expected to behave within the fictional word of the series. Rather than being told about the survivors' fears and resultant resolutions through textual or audiovisual means, players experience these fears themselves and understand the resulting decisions because they are the ones who make them within the confines of what works in the game space.

The series gameplay, in particular the abilities of Special and Boss Infected, are designed so, that certain behavior is more likely to lead to a successful playthrough whereas other actions will almost certainly doom the team. The behavior that is taught to the player as most successful and that they are encouraged to adopt tends to be most in line with common horror genre conventions of who gets to survive up until the end of the conflict. In his presentation of replayable cooperative game design, Booth mentions some of the core rules that make up the rhetoric of survival horror:

- •The Good Guys work together
- •The Jerks selfishly abandon the group (and die horribly)
- •The Enemies are ruthless and nearly unstoppable ("Replayable Cooperative" 15)

Although according to Booth, "everyone knows" (ibid) about these rules, this does not mean that Valve expects players to adhere to them solely for convention's sake. Rather, the *Left 4 Dead* series allows players to experiment with these assumptions and to test out for themselves that the jerks who leave the group really do die horribly in the world of survival horror.

The primary argument the *Left 4 Dead* series makes in regard to player behavior is the twin assertion that survivors need to stick together to make it (on the fictional level) and that teamwork is the winning strategy (on the level of play). According to Booth, Valve aims to "encourage cooperation throughout game design" ("Replayable Cooperative" 14) and to "avoid artificial/arbitrary enforcement" (ibid). Staying together should not be prescribed, but result from the players choosing the logical solution. In consequence, the game world designed by Valve is one in which a single player cannot survive alone, but one that does never restrict players from separating from the team to find out just how powerless they are

by themselves. This enables players to not just know about the conventions of the genre, but to comprehend and internalize them. Rather than simply see these arguments played out on screen as is done in many horror films, players get to experience them firsthand and learn to live by the rules through trial and error.

The most convincing lesson for survivor players to stick together is taught by the Special Infected. As mentioned before, some Special Infected have an immediately incapacitating attack. When falling prey to any of these Special Infected, a player has no other choice than to wait until they are rescued by their fellow survivors. The longer an attack lasts before it is stopped by other survivors, the more damage the attacked survivor takes. When a survivor player separates from their team, runs ahead or enters buildings alone, they put their survivor character at disproportionate risk to be attacked and killed. According to Booth, the Hunter Special Infected's primary design purpose is to "outrun and kill stragglers and 'lone wolf' players" ("Replayable Cooperative" 18) and the same claim can be made for the Jockey in Left 4 Dead 2. Both of these Infected are comparatively fast, but can be easily killed or pushed off their victims. Their attacks thus become more effective the further the victim is located from other survivors. The Smoker and the Charger have a better chance of removing survivors from the midst of their team through their attacks than Hunter or Jockey, but they too become more deadly the more isolated the victim is. For a survivor player to become isolated, they do not even have to be an intentional lone wolf player. They may simply be searching for items or curious of what is in the next room and underestimate the risk of a brief exploration. It is thus precisely through these encounters that they learn how advantageous tightly organized group play is to acting on whims and going on solo trips. Players that overestimate their own skills and awareness and intentionally keep running ahead of the team will learn the game lessen for cooperation rather quickly. Not only will they eventually get incapacitated far from other survivors and be killed without their help, they will also be unable to rejoin the game on their own. In the series' cooperative mode, a dead survivor can be rescued later on in the level from a rescue closet, but only by a fellow survivor. A survivor player who brashly ran into their own death has thus no other choice than to wait around until their team mates help them out of their self-created mess. The rule that splitting from the group means death is experienced firsthand and the dependence of a player on their team mates is demonstrated numerous times from attack to rebirth either through assistance or through its absence.

Another type of survivor-appropriate behavior enforced through procedural means is that of flight rather than fight. The survivor characters of the game fiction are all desperate to be rescued and have no particular desire to take on the zombie hordes. While these aspirations are reflected in the series' goals, this constitutes a deviation from the way traditional shooters function. Players coming from this tradition are likely to want to kill enemies as much as they want to meet the goals of the game. If those players are to act as credible survivors within the game fiction, they must be motivated to value the game's primary goal of escape much higher than their side goal of damage dealing. Moreover, the game design should create a situation in which these players actually wish to escape. In large part this is done through the high value attached to the survivor's body: if players have something to lose, they will be more likely to run for it. Another factor so far not explored from the survivor perspective is the way the enemy population is designed and spawned in the survivors' surroundings. Because enemy units constantly reappear, players are not given the satisfaction of clearing any area of zombies. While the act of shooting enemies during gameplay may still be experienced as fun, it is somewhat of a Sisyphean duty when not done for the purpose of moving onwards because it does not achieve anything in itself. Moreover, when players dawdle to needlessly take on remaining Wanderer Infected, they will draw more mobs while covering less distance, both exposing themselves to more damage and running out of ammunition much faster. Without ammunition, players must resort to secondary weapons that make killing zombies a tedious and largely ineffective exercise. Thus, precisely for shooting to remain fun in these FPS titles, players must learn to rush rather than stroll through levels, lest they get bogged down by mob after mob without effective means to dispatch of them. Escape does not only become the priority to meet the series' goal, but also paradoxically when players actually just want to shoot zombies for fun, encouraging survivor-like behavior even from the least survival-minded players.

6. Conclusion

The *Left 4 Dead* series' tale of zombie apocalypse is conveyed through many interrelated elements that affect players on different levels. While its audiovisual material may still be most easily processed as fictional element, the more game-specific narrative constituents like the corporality of avatar bodies and the systems governing AI behavior and influencing player decisions contribute to the game narrative in equal measure. It is only in conjunction with one another that these elements achieve their narrative potential and tell the game fiction in a meaningful, coherent way. Arguing that any one of them is the future or true potential of game fictions is shortsighted as it ignores the narrative context supplied by other constituents that each element is embedded in. A survivor character's peril for instance is conveyed through numerous ways: visually, as the fellow survivor begins limping on screen, aurally, as they voice their fears and pain, through the properties of their body as they begin to feel cumbersome and the player in consequence feels exposed and threatened themselves, a feeling strengthened by the player's knowledge that they cannot simply respawn. With any of these elements missing, the significance of the others for the game's fiction would change, producing a different effect and a different reading of the story.

Moreover, with any of these elements missing or altered, the *Left 4 Dead* series may no longer qualify as horror – or only superficially so. It is the series audiovisual elements that identify it as a work of horror, even before the player has to move their avatar a single step. Upon starting *Left 4 Dead* or *Left 4 Dead* 2, an introductory sequence is played: the only genuine film sequences in the series. After selecting a campaign, the loading screen displays a poster in the style of slasher horror films and upon entering the game proper, the player will hear the eerie soundtrack and see the dim and foggy landscape, before they get to pick up their gun and start moving. However, precisely at the point where the player-avatar enters the spatial representation of the game as an entity, a horror fiction represented solely through these audiovisual elements would quickly morph into little more than backdrop. When the player can examine their avatar's surroundings and see that they are not actually threatening, a horror game fiction becomes simply a game fiction with scary graphics. For a game fiction to be a work of horror, it must be able to horrify not just on its audiovisual surface, but on the level of play as well.

The *Left 4 Dead* series seems to present disgust, one of the twin components of horror fictions, on a primarily audiovisual level. The zombies' interstitial-ness does not really translate well to the series' game mechanics: they are simply a large number of enemy entities. However, the other component, threat or fear, is enforced heavily or even primarily

through the mechanics of play. Moving away from the FPS as power fantasy, the gameplay of the series is designed to make the survivor player feel vulnerable and out of control. The player's vulnerability is firstly inscribed into their avatar body: their limited health, dependency on team members, time needed to heal and threat of incapacitation. The level design and procedurally driven pacing also work to evoke a feeling of vulnerability. While conflicts of control are integrated into many aspects of gameplay (the survivor avatar's cumbersome slowness when injured, incapacitation and temporary blindness after boomer attacks), like in horror film it is expressed most directly in regard to camera movement. In horror film, camera control is a crucial aspect of its suspenseful cinematography: the viewer is powerless, because they are at the mercy of the camera. The Left 4 Dead series has substituted this staple of horror film with a tightly framed first person perspective that in conjunction with the architecture and visual design of the space mimics the long take of horror with great effect. With the player being able to turn "their camera" towards any darkened corner to their heart's content, the camera cannot fulfill the exact same narrative function of cinema, but does not have to. The player knows that for every zombie they spot before it can attack, there might be another right above or behind them, building tension precisely from the player's attempt and inevitable failure to see everything. The camera of horror film is not stifled through the game fiction's unique properties, but rather translated to work with it and yet retain its effect. In the brief sequences where the series does resort to camera control, the foreignness of the switch in perspective and the forced disengagement cutscene-like elements effect in players have been used as narrative elements in and of themselves: accompanying the shock of a violent attack and rendering the player completely and utterly powerless. Although we recognize the Left 4 Dead series as a work of horror because it looks like a horror film, while playing we only continue to parse it as a work of horror because it feels horrific on an experiential level inscribed into the mechanics of play.

As has become clear, the *Left 4 Dead* series borrows significantly from other media, in particular from cinema, but this appropriation does not appear out of place or incompatible with the game fiction's game-ness. Largely, the elements borrowed – lighting, pacing and sound – have been integrated into active play, in coexistence with other game-specific narrative elements. Even the particularly foreign feature of camera control during survivor incapacitation has a function in gameplay, even if it is just to create a contrast to "normal" play and to agitate the player. The only cinematic appropriations that could be argued to be "non-game element(s)" (Juul, *Half-Real* 135), are the film posters and credit sequences at the beginning and end of each campaign. However, they do not interrupt play as such, being

presented where the player does not expect to be able to act anyway and, like posters and credit sequences in film, supply information about and around the game, placing the games in the context of film fiction without displacing them from the context of game fiction.

Another observation to be made from the series' game fiction is that its game-specific narrative elements are neither arbitrary, nor unstructured. The properties inscribed in the avatar bodies, the systems that drive AI behavior and item placement and the architecture of the space in which resulting actions can take place are all authored in the same way that the game's sound files, textures and body meshes are authored. They are authored to present the game content in a particular way and to afford the player a particular experience when playing the game. The narrative they contribute to is still highly structured, but this structure is dependent on rules and logics as much or more than on sequence. A narrative operating under the logic of "what happens when" is no less specific than one operating under the logic of "what happens after" and can be used in the telling of a pre-structured story.

The conclusion to be drawn from this analysis of the Left 4 Dead series' narrative is that understanding game narratives requires an understanding of the way that old and new methods of storytelling function in digital games and how they can interrelate to produce new ways of telling stories. It is through the fusion of the different elements of a game that all contribute to its mood, pacing and narrative content, that the language of game fiction, or its current manifestation is formed. To create a convincing fiction, these elements must form a coherent whole: the unique way the game fiction is told. While this study has closely investigated one particular coherent game narrative, its results cannot reliably be generalized for other games, not even of the same narrative or game genre. They do however serve as helpful pointers of where to look. Further studies may now focus on a more comparative approach either within or between narrative and game genres to investigate which if any of the narrative methods uncovered here reappear elsewhere and which are particularly predominant in certain genres. What this case study indicates it that the way game elements like the game space, avatar bodies, higher level processes and audiovisual content interrelate can be specifically tailored to the type of story, in terms of narrative genre, the game developers aim to tell.

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