NARRATIVE AND GAMEPLAY DESIGN IN THE STORY-DRIVEN VIDEOGAME: A CASE STUDY ON *THE LAST OF US*

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Abstract

The story-driven trend over the last decade has experimented with incorporating narrative into the videogame alongside traditional gameplay. This study analyses some of the challenges when integrating narrative into the videogaming paradigm. A case study using formal analysis and close reading research methods analyses a critically and culturally acclaimed videogame titled *The Last of Us*. This study investigates the various design patterns of narrative and gameplay in *The Last of Us* to explore how narrative can be incorporated in the medium more effectively. Rather than using narrative as a subordinate feature within the system in *The Last of Us*, it is treated as a crucial component alongside the gameplay. Through various design methods, narrative and gameplay are layered together and overlap when the game is interacted with. Instead of competing for the player's attention, both the narrative and gameplay support one another throughout the game. This case study on the narrative and gameplay design in *The Last of Us* and the emergent implications of the design decisions demonstrates how story can enhance the experiential capabilities in the videogame medium.

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Attestation of Authorship

I hereby declare that this submission is my work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgments), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Kelsey Cameron

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And Taylor, for everything.

> *In the future we may see* [games with] *complex characters that arouse emotions, clever dialogue that brings out laughter, situations that create ethical dilemmas, surprising turns in the plot, and we already have games with stunning visual settings that create artistic pleasure. When this happens, narrative will no longer be subordinated to gameplay, – the game will be played for the sake of experiencing its narrative design.*
>
> **— Marie L Ryan | Beyond Ludus: narrative, videogames, and the split condition of digital textuality**

Chapter 1. Introduction

This study investigates the relationship between narrative and gameplay in the videogame medium. The constant advancement of new technologies has paved the way for wide varieties of game design methods. As Atkins and Krzywinska (2007) state, "In the context of a highly competitive marketplace, there is an understandable focus on new formats and new platforms, new console generations and new technologies, and this perpetual pushing of (often technological) boundaries drives games forward at a frantic pace" (p. 1). In 2007, Ryan predicted a shift in the way that videogame development typically deals with narrative, suggesting that games will be played to primarily experience the way stories are designed in the interactive medium. This study will explore how Ryan's (2007) prediction has become a reality because of the story-driven development trend.

1.1 **Research Problem**

Videogame development has generally treated narrative[1] as a secondary component of game design seen in successful titles like *Super Mario Bros.* (Nintendo, 1985 onwards), *Crash Bandicoot* (Naughty Dog, 1996 onwards) and *Grand Theft Auto* (Rockstar, 1997 onwards). The

[1] While narrative and all relative terms have meanings and connotations, uses of words like *narrative* and *story* will occur interchangeably throughout this paper unless specified otherwise. This is to move away from redefining an entire field to contribute to game studies in a focused manner by concentrating game design.

narrative in videogames has typically been presented through filmic cutscenes[2], which have been widely criticised in game studies and culture for reducing the immersive potential in a videogames interactive environment. In these cultural communities the cutscene, as Cheng (2007) suggests, is often considered to be a passive, non-interactive form when compared to gameplay and its direct interactivity with game spaces. Poole (2004) describes how immersion[3] can be disrupted by cutscenes where "You really want a good, exciting game of Ping-Pong, but you have to read a chapter of some crashingly dull science-fantasy blockbuster every time you win a game" (p. 96). In *Grand Theft Auto III* (Rockstar, 2001) for example, long cutscenes divide sections of play and tell the player pieces of a story along with gaming instructions. However, these cutscenes do not need to be watched in their entirety to understand how to play the game. In *Grand Theft Auto III*, written instructions in overlay the storyworld[4] to tell the player about the game's objectives. Utilising the cutscene as the sole aspect of narrative design in the videogame medium is problematic since the film-like passivity conflicts with active gameplay, which then interrupts the gaming experience as a whole. The cutscene as a general representative of narrative in the videogame gives the impression that storytelling is not achievable in the medium. When discussing Eskelinen's (2001) ludic[5] ideas (which stem from Aarseth), Klevjer (2002) writes:

> …one could say that not only cutscenes, but any pre-written narrative, fixed path, scripted event or movie-based character is a sign of immaturity, a dependence on film parallel to the way much early film was dependent on the conventions of staged drama. (p. 193)

While the passive and active conflict between narrative and gameplay is an issue for game developers wanting to incorporate stories into their games, this is also a major issue for players and the game playing experience. Although the criticisms of narrative in earlier game design may have been accurate at the time, ludologists have rarely acknowledged the development of narrative in videogames as a design issue. The *Grand Theft Auto III* example above indicates that the story is, as Crawford (2005) describes a "tacked-on feature" (p. 69) added only to provide additional content to motivate players to complete a game. Theorists Bizzocchi and

[2] Cutscenes describe sequences of animated short films or "scenes" that "cut" sections of play. Cutscenes are typically in place to tell a story about the game's content.
[3] Immersion, as Taylor (2002) states, refers to "The degree to which the player feels integrated with the game space is a measure of her or his sense of 'immersion'" (p. 12).
[4] The 'storyworld' is a figurative space that refers to the realm of imagination that an audience enters into to believe the fantasy of a given text.
[5] "Ludic" is defined by Salen and Zimmerman (2004) to mean "*of or relating to play*" (p. 303) and can also refer to any kind of non-gaming activities.

Tanenbaum (2012) also support this idea writing, “Narrative in digital games has made great advances over the past decade; however, it remains a challenging design problem” (p. 393).

The rejection of narrative as a crucial and beneficial component of the system does not accurately reflect the current development climate in the industry today due to the increasing presence of narrative in videogame design. Murray (2004) suggests that a “term is needed to mark the change we are experiencing, the invention of a new genre altogether, which is narrative in shape and that includes elements we associate with games” (p. 4). Although there are a variety of terms used[6] this development trend is described in this study as “*the story-driven game”*, simply because the story is what drives play. This trend acknowledged the immersive potential that narrative possesses and gained momentum in the late 2000s with more and more videogames being released that focus on creating narrative-oriented experiences in interactive gaming environments. Titles like *Bioshock* (Irrational Games, 2007), *Heavy Rain* (Quantic Dream, 2010), and *Dishonored* (Arkane Studios, 2012) were just a few of the first videogames that treated narrative as more than just a secondary feature of game design. Prior to this increasing trend, Murray (2004) suggested that theorists and developers “should […] think of the characteristics of stories and games and how these separable characteristics are being recombined and reinvented” (p. 10). Over time, the story-driven game has experimented with narrative design to achieve successful story telling in the gaming paradigm as Murray (2004) proposed. This new area of game development is beginning to unlock methods by which narrative can be incorporated into the medium alongside gameplay without harming what makes videogames great, but rather increasing their appeal to videogame players. Therefore, the aim of this study is to explore how future game development can solve the issue of narrative in videogames by asking: How can gameplay and narrative be designed together in a story-driven videogame so narrative is not subordinate to gameplay?

In her chapter ‘From Game-Story to Cyberdrama’ Murray (2004) suggests that an appropriate question currently facing game studies is to ask how developers can make better “cyberdramas” a term coined by Murray (1997) in her book ‘Hamlet on the Holodeck’, which refers to the play-like enactment in a digital sphere. Consequently, the research problem along with Murray’s

[6] There have been many terms used to described videogames with strong narratives. Murray (1997) used the term “cyberdrama”, Aarseth (1997) used the term “ergodic literature”, and there have been other terms widely used such as “interactive narrative”, ”story-oriented”, and “story-based” games.

(2004) call-to-action on “cyberdramas” highlights the need to study a game appears to have satisfied audiences from both a narrative and gameplay perspective. A story-driven game that fits this assertion is called *The Last of Us* (Naughty Dog, 2013). Developers of *The Last of Us*, Naughty Dog (2017) describe the game as “a genre defining experience blending survival and action elements to tell a character driven story” (para. 6). The game, they say has been “hailed a masterpiece” (para. 6). Naughty Dog (2017) also writes that *The Last of Us* has received “over 200 Game of the Year awards [... and] 40 perfect scores” (para. 6). ‘Bafta.org’ (2014), records nine ‘British Academy of Film and Television Arts’ nominations and five wins including “Best Game in 2014”. Haywald (2014) from ‘Gamespot’ reports that *The Last of Us* also won “Game of the Year at the Game Developers Conference” (para. 1). Similarly Raza (2014) from ‘Gearnuke’ suggests that the game is “the most awarded game in history by critics”. *The Last of Us* is selected for this study because of the assumption that with such tremendous success in the industry, this game is one of those titles that might change the trajectory of game development history.

1.2 **Significance of the Study**

As section 1.1 explains, game development is beginning to experiment more with the idea that videogames can be used to tell stories. Art-games, Indie-games[7] and the emergence of the story-driven genre has enabled us to explore the potential for different kinds of mediated experiences previously unseen in the industry. Since videogame audiences have large demographics[8] it is important to understand what videogames are capable of as artistic media and through research understand their implications for consumers and wider society. This study focuses on addressing the problems that arise with narrative in the videogame when it is treated as a secondary component of the system. As separate components within a gaming system, narrative and gameplay are also often investigated independently. Addressing how narrative can be designed alongside gameplay so that it is not a subordinate aspect of the gaming experience is significant to the industry because it demonstrates the possibilities of adopting this as a desired development approach.

[7] Art and Indie games describe a small team of developers that produce games outside of the mainstream with an emphasis on creating interesting and artistic gaming experiences (Parker, 2012).
[8] The Entertainment Software Association (2015) have reported that the average age for videogame players is 35, where 26% are under the age of 18, 47% are between the ages of 18 and 49, and 27% are 50 years or older. Additionally, 56% of audiences are male, and 44% are female.

Furthermore, this study is important to the field of game studies because it addresses the need to change how we approach the study of games. Often, game studies spend more time debating the best method to approach research, whether that would be a narratological or a ludological position. While narratology insists that narrative analysis is a beneficial field to approach the study of games, ludology rejects this by claiming that games as a unique phenomenon require a much more specific discourse than what narrative studies offers. However, as many theorists (Arsenault, 2009; Consalvo, 2009; Majewski, 2003) are beginning to suggest, debating which field is best to study a videogame now contributes little towards understanding what a videogame is. Instead, increasingly videogames are considered multifaceted-media and need to be studied accordingly. Rather than specifying which field correctly identifies what the videogame is, this study will attempt to acknowledge the multifaceted nature of gaming by researching how narrative and gameplay are designed together within the one system.

1.3 **Thesis Structure**

Chapter two of this thesis provides an overview of the research. This is followed by a literature review that outlines what a videogame is. Since this study is dealing with game design, the videogame is conceptualised as a complex system with embedded components and emergent potential. Exploring how the components of the system are generally designed and currently understood in game studies will inform the terminology used for this study. This chapter also explores the player's role constructing gaming events as an activity by discussing concepts like agency and immersion. Finally, this chapter explains a short history of how narrative has been designed which leads us to the story-driven trend.

Chapter three discusses the mixed-method approach to investigating *The Last of Us*. A case-study will frame the formal analysis and close reading methodologies to gain a wide understanding of the narrative and gameplay design and how these components function with the player to create emergent responses. This study also utilises the player's lens[9] as a research approach to properly investigate the emergent implications of the design.

Chapter four presents the results of the study when providing a case-description, followed by key findings of the narrative and gameplay designs. Lastly, the structure of how

[9] The player's lens is a term that describes how the gameplay and narrative components will be analysed to investigate the emergent implications of the game design. The player as the researcher acknowledges games as transformative systems where the player interacts with an embedded system to form an emergent one.

these various components appear in the system is presented according to the ways a player can interact with the game and engage in the story.

Chapter five discusses how the story and game are constructed in *The Last of Us* so that narrative is not subordinate to gameplay. This chapter will firstly explore the methods used in the narrative and gameplay design to achieve immersion in the act of play, and also immersion in the storyworld and suggest how each of the terms relate and overlap in the system. Next, this chapter will discuss where the design situates the player's role in both story and game. Lastly, the construction of all these components is discussed to contribute towards answering how narrative can be designed in the story-driven game so that it is not a secondary component of the gaming experience.

It is important to note here that this study frequently refers to a range of videogame titles in order to illustrate important points or to support arguments to specific areas in game studies. To aid in understanding the significance of these references, Appendix C contains supporting information (e.g type, genre, summary, and international date of release) about such titles. Since this case study investigates *The Last of Us*, this has been omitted from Appendix C.

…complexity is central to making games interesting

— Sid Meier | Libebroth and Roepstroff: Mixed methods in game research

Chapter 2. Literature Review

This literature review focuses on understanding videogames as complex systems by investigating the gaming paradigm as an artefact and activity. In this study, the player is also considered to be a crucial aspect of the gaming paradigm. Therefore, the player's perspective and concepts such as agency and immersion will also be explored here. The following sections aid the understanding of current theories in game studies while drawing from the game industry and culture.

2.1 **Videogames as Complex Systems**

Understanding videogames as complex systems begins with understanding the various components of game design. While consoles, computers and portable devices are technological systems in their right; the videogame as a "system" refers to the designed components and the player as well as the active relationship that arises through each party's interaction. As Murray (2004) explains, gaming is "procedural", generating events due to rules, and also "participatory", in the way they allow players to interact (p. 2). Therefore, videogames are understood in this study as artefacts and activities. Mäyrä (2009) states, "Games appear as deceptively simple objects for analysis" (p. 316) and while the specific definitions and ideas may vary the consensus among game studies scholars is that videogames are complex (e.g Juul 2011, Konzack, 2009; Meier, 2006; Salen & Zimmerman, 2004). This chapter introduces what a videogame is by exploring its major components, but it also relates ideas from game studies that position videogames as complex systems. The term "system" is used throughout this thesis to reference a collection of elements that are bound together. As Salen and Zimmerman (2004) define, "A *system* is a set of things that affect one another within an environment to form a larger pattern that is different from any of the individual parts" (p. 50). In the case of a videogame, the larger pattern refers to the play experience; what happens when players interact

and the individual parts refer to the designed components that allow experiences to occur. This definition suggests that while players engage with the individual elements (by performing a mechanical gesture or responding to a narrative device) they also engage with the larger pattern as a macrocosm of the game's design.

Tavinor (2009) writes, "One concern that has interested a number of game theorists is the question of exactly what games are" (p. 15). Defining the videogame as a cultural, economic and technological artefact has brought on a lot of debate in academic, industry and fan communities. Juul (2011) points out that the history of game studies "has been something of a gold rush and a race toward being the first to point out special aspects of games, to format the field, to define words, and to point to similarities and dissimilarities between games and other cultural forms" (p. 11). While videogames house a variety of different components, academia describes those components using a range of definitions based on research approach whether that be a narratological or ludological position. Tavinor (2009) writes that narratology considers videogames "as new forms of narratives or texts" (p. 15) and ludology, as Consalvo (2009) describes, "sees games as distinct from other media and technology forms" (p. 296). The narratological and ludological debates in game studies stem from the desire to define the origin of videogames to understand how they function. Tavinor (2009) writes, "the question of the nature of gaming is taken to ask which of the previous non-videogaming forms of culture videogaming most resembles" (p. 15). While narratology compares videogames to films and other narrative forms and draws narrative oriented methodologies to study games, ludology compares the videogame to other non-digital games and insists that digital games need to be studied specifically as games, not as extensions of other narratives. Juul (2001) points out that narratology "relying too heavily on existing theories will make us forget what makes games games: Such as rules, goals, [and] player activity" (para. 44).

However, theorists now identify that this need to define videogames based on the origin of their creation is harmful to understanding them because, as Majewski (2003) writes:

> It is becoming clear that computer games are not a single form – indeed, it is difficult to decide whether they even constitute a single medium, even if it is more convenient to keep them grouped together as a single academic field of study than to separate them into different fields. (p. 2)

Consalvo (2009) adds that it is important that game studies uses other theoretical lenses from already established fields to better understand the multifaceted natures of games. Additionally, Arsenault (2009) comments:

> …the task for researchers is to see the possibilities for adapting the notions and theories of narratology to video games without losing sight of their specificity. While ludology rightly pointed out that one should not blindly apply concepts from other disciplines in an act of "theoretical imperialism," one should also avoid the other extreme that would end up throwing the baby out with the bath water. (p. 369)

The issue for researchers now is to study videogames by considering their narrative and gameplay potential, while also acknowledging that games can be designed in many different ways. However, firstly to understand what a videogame is one must research the game itself. The following sections focus on discussing the videogame as a designed and emergent system referring to the components that make a videogame an artefact and a set of activities.

2.2 **Designed Systems: Videogames as Artefacts**

Investigating games as artefacts means to explore the components that make up the designed system. Jenkins (2004) coins the term "embedded" when discussing the pre-existing narrative components in a videogame. However, the embedded system in a videogame also extends to formal gaming components. The major embedded gameplay components that are explored in the following sections are rules, goals and mechanics that contribute to the gameplay "modes of engagement" (Tavinor, 2008, p.32). Additionally, the major embedded narrative components that are explored are structure, devices (as characteristics of the structure) and architectural models. Although many other important components are part of the gaming system, this research seeks to outline only the major components used for developing a story-driven videogame. Before conducting research, it is important to firstly outline the definitions of each design component to identify the vocabulary this study will use.

2.2.1 **Embedded gameplay components**

Embedded gameplay components are aspects of the system that contribute to creating the actual game. Katie Salen and Eric Zimmerman released their comprehensive book 'Rules of Play' in 2004, which defines game design components accurately while acknowledging the

history of other definitions and ideas. The sections below on *rules*, *goals* and *mechanics* are defined below based on Salen and Zimmerman's work.

2.2.1.1 **Rules**

Salen and Zimmerman (2004) discuss rules firstly by listing the game rules for *Tic-Tac-Toe.* The four rules that instruct play describe how the game takes place on a 3x3 grid where two players alternate putting an 'X' or 'O' in the empty squares. When there are three in a row of any marking, the game is won and if the spaces are filled before gaining three in a row the game is tied. Salen and Zimmerman (2004) go on to discuss that the four rules only include the information necessary to begin playing the actual game. Therefore, a rule is defined as "the deep structure of a game from which all real-world instances of the game's play are derived" (Salen & Zimmerman, 2004, p. 120). Rules govern what the player can to do in the system by setting up parameters and instructions surrounding play and therefore, telling the player what they can and cannot do in the system.

2.2.1.2 **Goals**

Salen and Zimmerman (2004) suggest that game goals are designed to create a purpose and sustain a player's interest. While rules set up play parameters, goals are in place to motivate the player to continue. In the *Tic-Tac-Toe* example, the rules define what the player can do. However, the goal is to win the game and beat your opponent. Without the driving thrill of competition the game is left unresolved and there is no winner. Ludic-focused goals have "quantifiable outcomes" (Salen & Zimmerman, 2004, p. 258) that identify the winners and losers of a game. However, as games become complex by introducing abstract components such as stories, game goals and their implications for the player start to become more complicated.

Goals that function in narrative settings (like in the story-driven game) "guide players in understanding the significance of their actions within a narrative context" (Salen & Zimmerman, 2004, p. 385). The act of achieving goals within this narrative setting is tailored specifically to the individual players' circumstances and their situations at the time of play. Therefore, goals set in the fictive spaces of a game can produce additional meanings in relation to the player and the embedded story. Although game goals have a simple premise and intention in game design,

they are important because the meanings they produce and ramifications can extend beyond the game itself to influence the player and their game experience in unpredictable ways.

2.2.1.3 **Mechanics**

Mechanics are crucial to understanding how effective the design of a game is because they are what physically links the player to the system. In a videogame, mechanics are the tools a player uses to interact with the system by pressing a button on a controller or keyboard or by moving a joystick. Salen and Zimmerman (2004) describe the central mechanics as the "basic game actions or set of actions that players repeat over and over as they play" (p. 579). The developer sets mechanics, although in some cases, they can be changed to suit the individual player's preferences. Elson, Breuer, Ivory and Quandt (2014) write, "Mechanics […] define the options for interaction in and with a game" (p. 526). Therefore, there are physical mechanics, which describe the physical movement a player makes in the physical world, or there are gameplay mechanics, which describe what the player can do with those physical mechanics inside of the game world.

2.2.2 **Embedded narrative components**

"Embedded narrative" is a term that describes the designed narrative components within a videogame that exist as part of the pre-generated system. The embedded narrative components discussed here (structure, devices and architectural models), draw from the works of Jenkins (2004) in 'Game Design as Narrative Architecture' and Majewski (2003) in 'Theorising Video Game Narrative' to conceptualise the way an existing narrative is incorporated into the videogame. Although there are many other important narrative components in the system, this research seeks to outline the major components used for developing a story-driven videogame and the design decisions involved.

Henry Jenkins (2004) conceptualises the pre-existing narrative components in a system as the "embedded narrative". Salen and Zimmerman (2004) describe Jenkins' (2004) embedded narrative as "pre-generated narrative content that exists prior to a player's interaction with the game" (p. 383). An embedded narrative is most commonly presented through non-interactive predetermined cutscenes. Although contrasting these fixed filmic sequences against interactive gameplay has the potential to draw a player out of immersion, they were "designed to provide

motivation for the events and actions of the game, player's experience embedded narrative as a story context" (Salen & Zimmerman, 2004, p. 383).

2.2.2.1 **Narrative structure**

Depending on the game, narrative structures designed in the videogame resemble or "remediate", as Bolter and Grusin (1999) discuss, many of the prior qualities that are seen in other cultural media. McKee (cited in Majewski, 2003) suggests that the most common narrative structure is the restorative three or four act structure, which can be approached in a classical, minimalist and anti-structural way. Acts are in place to divide sections of the plot to describe different stages of the story, as illustrated in Figure 2.1. *The Hero's Journey* narrative structure is used as an example here; in the first Act, the hero is "called to action", the second Act sees the hero's "rising action and climax", and the third Act "resolves" the conflict. Changing particular characteristics of the example will determine the approach to storytelling. For example, while a classical structure would have a closed ending a minimalist structure would have an open ending, and the anti-structuralist rejects all traditional characteristics.

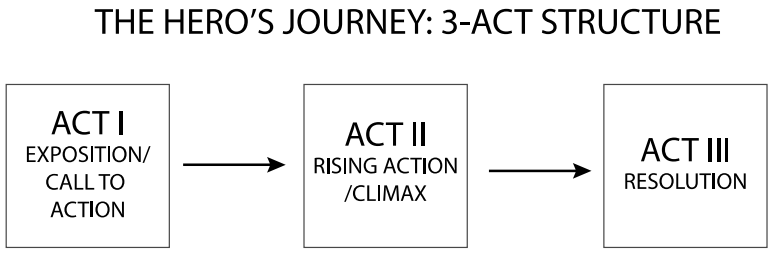

Fig. 2.1 *The Hero's Journey* 3-Act structure
Source: Cameron

A narrative structure simply describes the characteristics of the plot to understand how a story is constructed. Much like a film, novel or play, videogames use narrative structures to organise plot events, assuming that the game incorporates some kind of embedded narrative. While videogames like the *Uncharted Series* (Naughty Dog, 2007 onwards) use narrative structure in a way that resembles extended films, shorter indie games resemble feature-length films like *Everybody's Gone to the Rapture* (The Chinese Room, 2015) or *Journey* (Thatgamecompany, 2012) and there are now episodic games such as *Life is Strange* (Dontnod, 2015) or *The Wolf Among Us* (Telltale, 2013) that resemble novels or television shows.

2.2.2.2 **Narrative devices**

Narrative devices are characteristics of narrative structures that are used to communicate the story to an audience. Like a film could highlight an item, scene or mood with camera, lighting or aural techniques, these devices are important in a videogame context because they direct or inform the rules, goals, mechanics or choices in the game. In short, narrative devices instruct the player about what they must do by using context to inform the gaming components.

2.2.2.2.1 **Dialogue**

Dialogue can be used to communicate important information to the player. Dialogue as a characteristic of the narrative structure is used inside of the storyworld where conversations between players indirectly inform the gaming objectives or offer additional information about the story. An example of this is in the *Uncharted Series* where protagonist Nathan Drake often travels with a companion that points out puzzle clues or directions so the player can complete an objective. While dialogue in other narrative forms is used to relay conversations between characters in ways that contribute to the overall narrative, videogame dialogue is also used to frame gaming instructions in a narrative context. Likewise, in *Red Dead Redemption* (Rockstar San Diego, 2010) after a cutscene has outlined the new gaming objectives, characters talk to one another about that objective while on the way to completing it. However, the characters also discuss subjects unrelated to the game tasks that establish their identity and relationships with other characters much like a film or novel would. Therefore, dialogue can be used to contribute to the story but also to aid an understanding of the game.

2.2.2.2.2 **Cutscenes**

Cutscenes are digitally generated non-interactive filmic sequences that rely on the player's passive engagement. Cutscenes are another narrative device mentioned throughout this chapter. They are often criticised in game communities for negatively affecting the experience of a game because they risk drawing the player away from immersion specifically in the act of play. As Majewski (2003) notes, "a cutscene […] suspends gameplay" (p. 14), drawing the player out of the formal gaming components and into a filmic narrative mode. While they are critiqued in this way, cutscenes function in the same way as dialogue by presenting information

to the player in a unique way and giving instructions about future goals and concluding completed ones.

2.2.2.2.3 **Point-of-view**

Point of view influences the reading of a text because it relies on the audience's physical position and mental perception. A particular videogame characteristic is to allow the player to manipulate the camera. Bolter and Grusin (1999) describe how the player becomes “both actor and director” (p. 47) by using the camera to control what is seen and how it is seen. The ability to change the way a text is seen gives the player more control over the ideas that a game expresses. Videogame developers are beginning to control the camera in a way that does not interrupt play.

Fig. 2.2: Close up: gameplay in *Tomb Raider*
Source: *Tomb Raider* (Crystal Dynamics, 2013)

In *Tomb Raider* (Crystal Dynamics, 2013) for example, when the protagonist Lara Croft is climbing through a small cave (Figure 2.2), the camera zooms in, and movement is restricted to convey claustrophobia. The player, by enabling her, can simulate this experience through her point-of-view. Additionally, in the *Uncharted: A Thief’s End* (Naughty Dog, 2016) the fourth game of the series, the camera zooms far out, and movement becomes restricted when the character is climbing across an expansive landscape (Figure 2.3). This offers a sense of danger

since the player can have an extreme long shot view of the character while controlling them, effectively seeing where the characters are going to fall should the player make a mistake.

Fig. 2.3: Long shot: gameplay in *Uncharted: A Thief's End*
Source: *Uncharted: A Thief's End (Naught Dog, 2016)*

2.2.2.3 **Narrative architecture**

Majewski (2003) examines "the characteristics of video game narrative" (p. 2) by researching videogame narrative models. These models are described by Jenkins (2004) as "architecture". Jenkins (2004) argues that game designers can be thought of as narrative architects due to the way game environments are constructed and engaged with – as spaces of narrative potential. Therefore, narrative architectural models describe the way that narrative is built in a system as pre-generated content with the intention of interactivity. In his thesis, Majewski (2003) discusses four narrative architectural models (String of Pearls, Branching Narrative, Amusement Park, and Building Blocks) to highlight that games are vast and adaptable. Although there are general trends in videogame design, they are guidelines rather than rules. The architectures Majewski (2003) discusses are examples of a few basic but central models that are taken on an adapted by game designers to suit the genre of the game produced. New design methods and models emerge as developers come up with new ideas and as technology catches up with those new ideas.

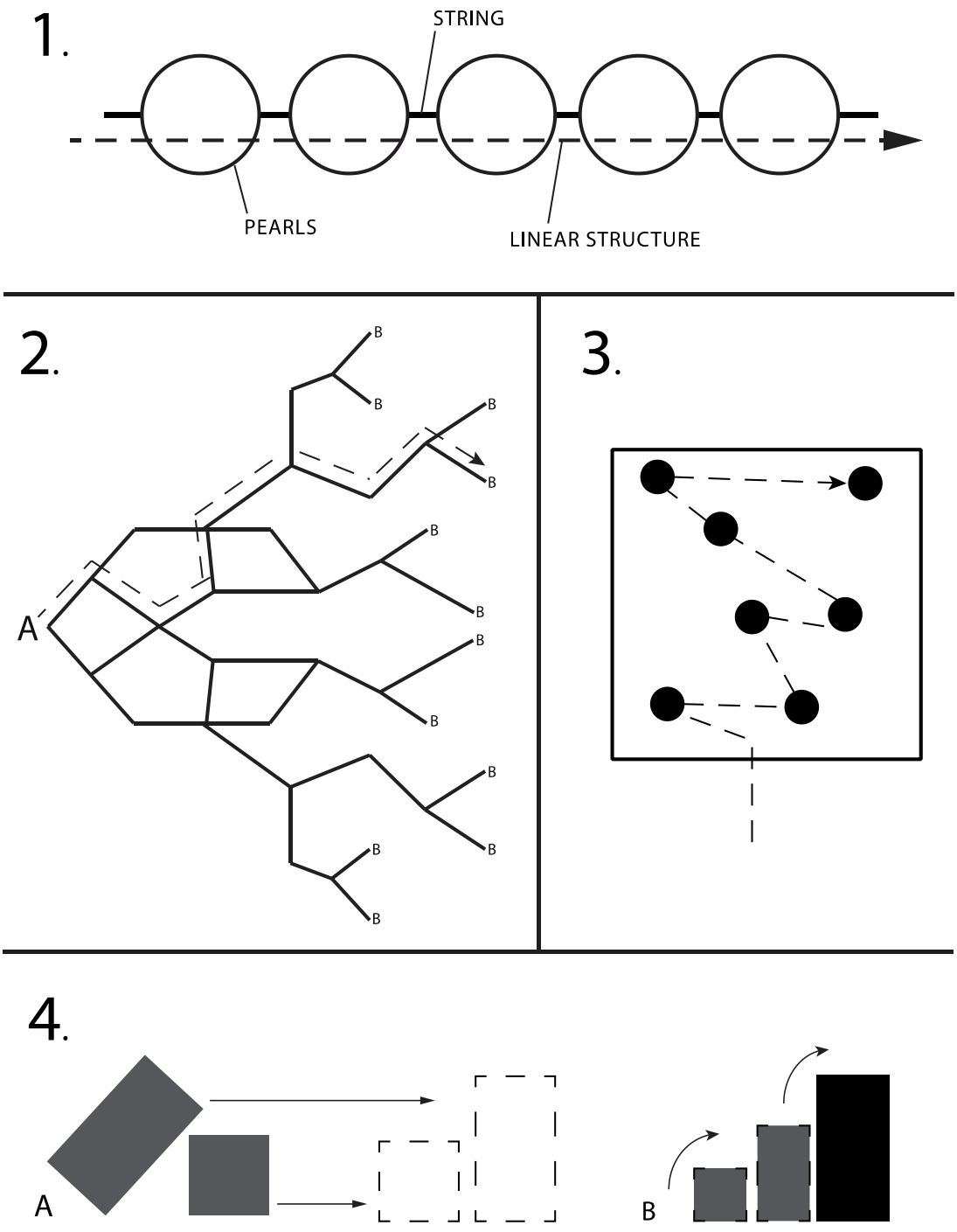

Fig. 2.4: Narrative architectural models

1. String of Pearls, 2. Branching Path, 3. Amusement Park, 4. Building Blocks

Source: Cameron

The first and most commonly discussed model is called the “String of Pearls” illustrated in Figure 2.4(1). While the pearls make up the gaming content, the strings often show cutscenes that consecutively connect sections of the game, which form the entire necklace, or entire game. In *Tomb Raider* for example, the player embarks on a series of consecutive challenges

that linearly reach the same conclusion as other players. Although there is some agency due to some weapon choices and the path that the player takes as a result of the environmental maps the overall actions largely remain the same. In this model, games typically follow a *"task–action–task–action"* format.

The second model, the "Branching Narrative" (Figure 2.4[2]) is used so that the player can control the outcome of the plot from a set of pre-generated circumstances. This model is based on the player making decisions about what path to take. In *Life is Strange* for example, the player controls one character that can rewind time. The ability to rewind time, combined with an array of dialogue choices determines the outcome of the story. Although the story is still pre-generated in this architecture, it is largely up to the player to control their desired outcome.

The third model is called the "Amusement Park" (Figure 2.4[3]). In this model, different sections or levels are placed throughout a game-world. Like how guests at an amusement park choose what ride to go on, the player chooses what level to complete. In *Grand Theft Auto III*, players enter the game through a series of cutscenes and are then able to choose what missions to complete by visiting a variety of bosses[10]. Throughout the game, the player can complete a variety of side missions that do not follow the main storyline. This architectural model gives the player an overwhelming sense of agency over what missions are completed and when.

The fourth model is named the "Building Blocks" (Figure 2.4[4]). Rather than incorporating a distinct embedded narrative that guides the player through a pre-generated series of events, the Building Blocks is an environmental space with systematic rules that motivate play (Jenkins, 2004). In *Minecraft* (Mojang, 2011) for example the environment has a set of rules allowing the player to construct items and do as they wish. However, a rule that motivates play and emergent possibilities is that monsters come out at night to attack the player. To remain safe, the player must create some a hiding place. While there is little to no formal structure or embedded narrative, emergent stories unfold as the player adjusts to the environment.

Videogames incorporate narrative as embedded components that are influenced by other narrative forms such as films and novels. However, these components are adjusted to suit the

[10] "Bosses" are final challenges towards the end of a level or game, usually described as a "boss battle".

interactive nature of the videogame medium. While formal structures used to organise the plot resemble typical narrative modes, devices are used to communicate instructions to the player and architectural models help to structure content in an environment that enables interactivity. These narratives, as Jenkins (2004) proposes, create "the preconditions for an immersive narrative experience" (p. 123).

2.3 **Emergent Systems: Videogames as Activities**

Discussing videogames as designed systems contributes to the idea that they are artefacts with an array of components which, when joined form a larger systematic pattern. As Järvinen (2009) points out, "playing games is a fundamentally human activity" (p. 85). Therefore, it makes sense to investigate videogames as activities as well as artefacts. Interacting and engaging with the embedded components in a system causes emergent content, events and narratives to occur (Salen & Zimmerman, 2004). When the embedded content of a videogame is interacted with as the player makes choices, emergence happens and is defined by Salen and Zimmerman (2004) as "the phenomenon of unplanned patterns appearing from within a system" (p. 152). Therefore, making choices allows players to create their emergent journeys and gives each player agency over their gaming experience. Emergence describes what a videogame does when the game and its components are interacted with. It acknowledges both the transformative qualities that videogames possess and how players are a crucial piece of the game design. Without the player, the game only exists as a pre-generated system; it is what is done with the system that makes a videogame a game. Therefore, it makes sense to consider games as activities too. There are two ways emergence will be explored in the sections below. The first explores how emergence occurs through play and the second discusses how emergent narratives[11] that document a player's journey are created because of play and interaction.

2.3.1 **Emergence through play**

In discussing Huizinga's (1955) book 'Homo Ludens', Salen and Zimmerman (2004) suggest that play is how we make sense of the world:

> …play and games, which have been maligned in recent history as trivial and frivolous, are in fact at the very centre of what makes us human. "Play is older than culture" as Huizinga puts it, and

[11] Emergent narratives are described by Jenkins (2004) as unpredictable gaming events that record the player's actions and create their own play narratives of the gaming experience.

> *Homo Ludens* is a celebration of play that links the visceral, combative nature of contest directly to war, poetry, art, religion, and other essential elements of culture. (p. 32)

In videogame culture and academia, the concept of play is commonly described as "gameplay". Juul (2011) defines the term "play" as a free-form activity and the term "game" as a rule-based activity. Gameplay therefore, considers the formal structure of a game while allowing for some degree of agency. As Zimmerman (2009) writes, "when rules are taken on and adopted by players who […] follow the rules, play happens" (p. 26). Zimmerman (2009) goes on to suggest that while "rules are closed and fixed, play is improvisational is uncertain" (p. 26). This freedom and the unpredictable actions performed by the player creates emergence.

Caillois (cited in Genvo, 2009) describes four *play* characteristics as *agon*, *alea*, *mimicry* and *ilinix*. These characteristics translate to competition (*agon*), chance (*alea*), make-believe (*mimicry*), and the disruption of reality caused by engagement, or immersion (*ilinix*). Videogames, (depending on the rules) encourage different characteristics of play. For example, *Minecraft* encourages freedom of play but does not specifically incorporate elements of competition. However, competitions can arise according to a player's choices and these create emergent gaming events. The *Minecraft* environment offers the player a lot of free-play rather than rule based-play. Salen and Zimmerman (2004) suggest that "simple rule sets can create tremendous amounts of emergent complexity" (p. 164) because a player's choices are unpredictable and unique. Therefore, creating too many rules, too many goals or a specific pathway of how a game should be played could negatively affect the play experience by being too contrived. *Minecraft* transforms into an activity when the player chooses to do something with it. This satisfies Salen and Zimmerman's (2004) suggestions on emergent complexity by creating an environment specifically designed so that the player can create their own game, and therefore, design their own emergent experience.

2.3.2 **Emergent narratives**

The field of ludology in game studies suggests that narrative is synonymous with a film or play, as a told sequence of events. As Juul (2009) points out "Stories are predetermined sequences; games are not determined (otherwise they would not be games)" (p. 363). This is the major issue with narrative in academia and the development industry. Conceptualising narrative in a videogame as a traditional narrative form where the events are recounted, having already

occurred directly conflicts with the idea that play is a constructed event, occurring in the present. Aarseth (2004) stated that “The weak and repetitive tradition of adventure story-games such as Myst and Half Life should not be given our privleged, undivided attention, just because they remind us more of the movies and novels we used to study” (p. 68). Additionally, Davis (2016) stated that game developers will “never be able to match the […] story telling ability of […] a movie or book”. Matching the story telling ability of other mediated forms presents many complicated issues that this study has addressed. In previous game design, interaction only highlighted the sparse differences between films (as cutscenes) and videogame play. While it is true that events are told rather than constructed in traditional narrative form telling stories, as films and novels do is not the intention of the story-driven game. Ryan (2007) suggests that videogame narrative cannot be reduced to a film or novel’s logic because videogames “exemplify different narrative modes” (p. 13). Furthermore, a film-like narrative is not the only form of narrative that is designed for the medium. Emergent narratives are designed to occur much like their gameplay counterparts. Through play, the player can construct her version of events that documents a specific play pattern or an emergent narrative. While an embedded narrative refers solely to the content inside of the storyworld, emergent narratives also refer to the player’s authorship constructing an entire gaming experience.

According to Jenkins (2004) an emergent narrative is “not prestructured or preprogrammed, taking shape through the game play” (p. 128). An emergent narrative describes the larger pattern of the gaming experience including the playing of a game as an activity but also the experience of interacting with embedded components. Like Jenkins (2004), Ryan (2007) describes an emergent narrative as an event that is “not preplanned by the designer but takes shape dynamically as a result of the interaction between the user and the system” (p. 17). Emergent narratives therefore, acknowledge the performative qualities that videogames possess and the collaborative authorship that takes place during play. Salen and Zimmerman (2004) add, “player choice leads to unpredictable narrative experiences” (p. 383) and the designers are not always able to control the meaning that their videogames express. Rather, emergence supports the opposite by allowing the player to create their meaning based on their decisions in unique moments of play. A film for example, studied as a text explores the ideas and meanings that the designed components or characteristics of the narrative structure create. However, in a game the player can manipulate those components so that the meaning

transforms. A film has different camera techniques that convey different meanings. A camera slowly panning across a scene may create suspense from which the audience then infers meaning. However, the players of a game may have the ability to disrupt the way a camera moves and in turn, convey an entirely different meaning to what the developers intended. While in a film the camera pan represents an idea a disrupted camera pan constructs a new idea or an emergent narrative, as Ryan (2007) comments:

> Since narrativity is based on the fundamentally linear chains of temporal sequence and casual relations, the kaleidoscopic chunking of the text into recombinant fragments constitutes a major obstacle to the construction of narrative meaning. This chunking and shuffling prevents the author from controlling what information the reader possesses when he encounters a given fragment. (p. 11)

The player's ability to shuffle technical components gives the player authorship over moment-to-moment play and collectively, the larger systematic pattern of a game. In a sense, the player is in control of designing his or her own experience by interacting with an already designed system. Considering this, the term "collaborative" is an important description of emergence because it describes an active relationship between system and user, medium and consumer and how each party interacts with one another (programmed or not).

2.4 **The Player's Role**

The player's role is a crucial component of the gaming paradigm and can be understood as the third major aspect of the videogame system. As the player interacts with the embedded system, emergence happens because the player constructs, part if not all (depending on the design) of the games events. In a videogame system, the player is afforded agency to make changes to the embedded components that generate emergence and has the potential to lead to immersion. These concepts are widely discussed in academia with a range of definitions and considerations. The intention here is not to re-define these terms, but to state how they will be understood in the specific context of this research. The following sections on the player's perspective, agency and immersion inform how the player's role is crucial in a videogame context.

2.4.1 **A player's perspective**

The role of a videogame player is crucial for understanding how videogame design creates emergent potential. As Juul (2001) identifies, videogames are unique forms because they allow for "the projection of the player's actions" (para. 44) in a digitally constructed environment. Consequently, when games are interacted with, they transform to become phenomenological entities in their own right. Newman (2008) argues that players are necessary to understand the videogames experiential capacity fully. Konzack (2009) supports this idea too suggesting that players actively take part in an experiment to explore games and their environment from many different perspectives. Both Newman (2008) and Konzack (2009) suggest that the player transforms a game by creating unpredictable emergent events. Consequently, it is necessary to acknowledge the player as a crucial, albeit "outside" component of the gaming paradigm. Videogames are made for interaction where the player co-constructs game events. Therefore, the player is an important aspect of game design because they influence the trajectory of emergence.

2.4.2 **Meaningful agency**

Agency is a term used in gaming culture to describe the control afforded to videogame players. Making choices in a game is how the player interacts to become an active participant in the system. Salen and Zimmerman (2004) conceptualise two forms of videogame choice as micro-choices, referring to the moment-to-moment decisions in play, and macro-choices that join "to form a larger trajectory of experience" (p. 61). While making choices via mechanics satisfies the definition of agency on basic level, Salen and Zimmerman (2004) offer a deeper argument; that creating "instances of meaningful play" (p. 61) needs to extend beyond the ability to simply interact and control. Instead, they claim that a meaningful system arises "When a player makes a choice in a game, [and] the system responds in some way" (p. 61). This cycle of agency that generates meaning is illustrated in Figure 2.5.

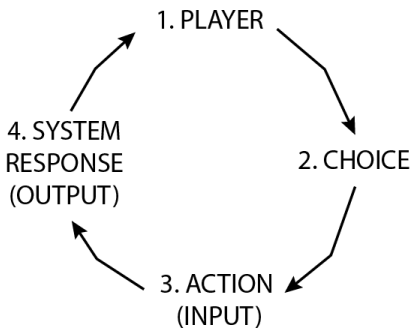

Fig. 2.5: Cycle of agency: generating meaning

Source: Cameron

Meaning[12] in this context refers to the way the system responds to the player's decisions. For example, a game called *Heavy Rain* creates instances of meaningful agency by holding the player accountable for their micro-choices. Micro-choices in the game prompt the player to decide where to go, decide which path to take, or whom to talk to. There is one sequence in particular where one of the characters is kidnapped and needs to fight her way to freedom. If the player fails to perform a mechanic, perhaps by not paying attention, the character dies and so does any story line for that character. *Heavy Rain* uses timing as a design device to force the player to act to which the system responds with an outcome that is directly affected by the player's input. Therefore, the player's next action is influenced by their own choices and the consequences that the system produces. Thus, the systems outcome in this *Heavy Rain* example is a consequence to the player's micro-choices. Here, meaning is established through the player and system's active relationship, a pattern that continues throughout the game. To design instances of meaningful agency, the game requires some kind of consequence that directly affects the player's subsequent actions. Therefore, agency does not solely refer to the amount of control a player has in a game, but what lasting impact it has on the act of play, the player and their overall gaming experience.

2.4.3 **Immersion**

In gaming culture immersion is a term that refers to the player's engrossed attention and type of attention that occurs while playing a game. Immersion is widely discussed in game studies to capture what it means to interact with videogames. Bizzocchi (2007) discusses theorists Coleridge (1984) and Csikszentmihalyi's (1990) different ideas about immersion, suggesting

[12] "Meaning", as Salen and Zimmerman (2004) describe "emerges from the interaction between system and context" (p. 374). Meaning is therefore, created according to how each individual player reacts and responds to the elements of the system.

that there are multiple ways to experience a videogame. While Coleridge (1984) describes immersion as the willing involvement and belief in the fictive spaces, Csikszentmihalyi (1990) describes immersion as an interaction with the unique process; the flow of play. Here, Coleridge (1984) describes immersion in terms of the player's relationship to the storyworld and Csikszentmihalyi (1990) describes immersion in relation to the act of play. These two forms of immersion are conceptualised by Taylor (2002) as diegetic (immersion in the act of play) and intra-diegetic (immersion in the storyworld). In the context of this study, immersion as a state of engagement refers the way a player becomes attached to the player of a game as an activity and also the attachment to a digitally constructed world. Although increasing immersion is in part the player's responsibility, there are design techniques that create more effective immersive experiences than others. There is a common misunderstanding in industry and cultural communities that improved graphics will lead to effective immersion (Frasca, 2004). However, this is certainly not the case. Although increased graphical realism is reaching impressive animated levels seen in games such as *Horizon: Zero Dawn* (Guerilla Games, 2017) or *Dear Esther* (The Chinese Room, 2012), there are also games with a lower standard of animation such as *Gone Home* (Fullbright, 2013), *Virginia* (Variable Stale, 2016) or *That Dragon, Cancer* (Numinous Games, 2016) that still encapsulate the immersive capabilities of the digital medium.

2.5 **A Gaming Context: The Story-Driven Design Trend**

The design issue that has motivated this study is the way that narrative is typically treated in videogame design. This issue is at the core of the necessity to explore gameplay and narrative components together. The narratological and ludological debates sought to differentiate these "narrative" and "game" components, and in doing so, the nature and definition of videogames are questioned. However, as discussed in section 2.1 above, Arsenault (2009), Consalvo (2009) and Majewski (2003) suggest that disregarding each field as a crucial aspect of game studies can hinder the understanding of what videogames are and what they can do for players. To emphasise Majewski's (2003) statement, "computer games are not a single form – indeed, it is difficult to decide whether they even constitute a single medium" (p. 1). Therefore, the narrative capacity of videogames beyond remediated forms like films and novels must be studied in terms of *design* to understand "what", and *emergence* to understand "how". The following discussion touches on a few key videogames over time to show how narrative is typically treated in game design and how the story-driven genre is beginning to treat narrative differently.

As a product of modern technology, the videogame and its designs are influenced by technical parameters at the time of development. Early videogames like *Pong* (Atari, 1972) or *Tetris* (Sega, 1984) exemplify the roots of development and design trends. Technological restrictions only enabled simple graphics and rule sets. While these early titles may have created emergent narratives through play, they were generally void of any embedded narratives. Wolf (2008) in his videogame timeline describes how the arcade game industry took off in the 1970s as many companies began to produce videogames. Gradually, videogames began to incorporate narrative more often as a design component. Crawford (2013) states:

> …game designers have attempted to graft some sort of story onto their games. First, they included story in the game's manual, then they started including it inside the game with cut scenes. Modern methods are technologically far superior to the methods of yesteryear, but they remain similar in overall strategy: A story is added to the game. The story and the game are separate creatures sharing the same box; the connections between the two are sparse. (p. 151)

Crawford (2013) emphasises that videogame development tend to favour gameplay as the fundamental design component because of the technological parameters in early game design (pre-cutscene era). Imposing embedded stories into a digital sphere requires a lot of graphic complexity and animation. In 1980, *Pac-Man* (Namco) was released in North America (Wolf, 2008) with an emphasis on character establishment and representational rewards within the game. Although there were no cutscenes at this time, *Pac-Man* had a simple narrative context bound within the game goals that created loosely structured embedded narratives. Rather than moving a pixelated dot across a screen to collect smaller dots, the player moves the character of *Pac-Man* around to collect food like cherries or strawberries, while avoiding ghosts as obstacles. While the goal in *Pac-Man* is simple, the embedded details enabled contextual emergent events to occur when the game was played.

The release of *Super Mario Bros.* in 1985, which according to Wolf (2008) became "one of the best-selling games of all time" (p. xviii) evolved narrative even further by creating story-oriented goals. Princess Peach is the damsel in distress kidnapped by King Bowser and it is Mario (and the players) role to save her. Although this embedded story is in place to provide additional motivation for the player to continue, it is secondary to formal gaming components such as level design, mechanics and game-oriented goals. As a game, the early *Super Mario Bros.* is a 2-D

side-scroller with a series of different skill-based platforms (levels). Videogames use a variety of design methods to keep the player engaged with playing their games. As Salen and Zimmerman (2004) describe, narrative is "Designed to provide motivation for the events and actions of the game, players experience embedded narrative as a story context" (p. 383) The narrative in *Super Mario Bros.* is another tactic to engage players. Rather than creating a narrative form that satisfies the games interactive qualities, the narrative was remediated by other forms such as a book in gaming manuals, or a film in cutscenes (Crawford, 2005). Game developers would "design the game first, and then add a story the same way they add animation, sound effects, and music. It's just another tacked-on feature" (Crawford, 2005, p. 69). This results in a game that contains some aspects of storytelling (Crawford, 2005). Narrative as a secondary feature continued consistently throughout the 1990s in mainstream videogame development with popular titles such as *Crash Bandicoot*, *Grand Theft Auto* and *Spyro* (Insomniac Games, 1998 onwards). There were, however, exceptions such as *Myst* (Cyan Worlds, 1993), which had a large emphasis on story. Jenkins (2004) notes "It is no accident [...] that game design documents have historically been more interested in issues of level design than on plotting or character motivation" (p. 121). Game design that deliberately incorporates a story through manuals or cutscenes is secondary to gameplay because it cannot be interacted with. Adopting passive narrative forms from other media is a design issue because of the interactive qualities of games and videogames have. Crawford (2013) suggests:

> Interactive storytelling is *not* the goal of video-game designers; their desire is to increase the appeal of their games by adding stories to them. To video-game designers, story is an embellishment and selling point, rather than an end in itself. A good story is, to them, no different than good music, good graphics, and a good video… (p. 152)

Crawford's (2013) critique of videogame developers' use of narrative suggests that stories are treated as other gaming techniques and used only to increase the games appeal. Podcaster, Hatfield (2016) adds to this point, "traditionally, videogames have not even had very good stories. When people started making videogames, a writer was not part of the development team". From the same podcast Petty (2016) explains, "games are not typically designed to be that kind of experience". Stories were not used as a central part of the game.

However, videogame design shifted in the way games dealt with narrative in the late 2000s. Rather than "tacking" a film-like narrative form onto an already established gaming environment as a way of motivating the player, many developers began to integrate narrative with other gaming components to solve the immersive issues of cutscenes and to produce a more interactive narrative form. Zimmerman (2004) writes, "game developers increasingly rely on filmic story techniques […] turning present-day computer and video games into a kind of mutant cinema" (p. 154). Instead of engaging in competition, the purpose of these story-driven games is to experience the story through the game. The emphasis here and definitive qualities of the genre is that the story is what drives the player to continue, as opposed to heavily engaging in the characteristics of play (chance, competition, mimicry and immersion). While these games do incorporate play characteristics, the narrative is thought of as the central mode of engagement. Ryan (2007) predicted this shift prioritising narrative in videogame design suggesting that soon, videogames will be played to experience the narrative. The story-driven videogame is designed to give the player a complex-interactive-narrative experience through the videogame as a medium. The task, as Ryan (2007) suggests, is to create a videogame where the narrative is not "subordinated to gameplay" (p. 14). Although videogames such as *Grand Theft Auto* or *Fallout* (Bethesda Games Studio, 1997 onwards) have strong story lines the main focus is not to discover the story. This is not to say that game narratives like *Grand Theft Auto* or *Fallout* narratives are designed badly, only that the story suffers because the gameplay is designed as the player's central focus.

Perhaps the first videogame to kick-start the story-driven trend is *BioShock.* The construction of narrative in *BioShock* paved the way for other games of its kind by showing that structuring the narrative to blend seamlessly with the action can create an "essential gaming experience" (Onyett, 2007, p.3). Like the protagonist in *BioShock*, the player is thrust into a foreign underwater city, Rapture. Both parties are unaware of the protagonist's identity, an aspect of the narrative. This is immediately intertwined with the gameplay because the game goal is now to discover who the protagonist is. Here, narrative context aligns the players and characters motivations through the gameplay. *Bioshock* is just one example of the growing story-driven genre. These games challenge the way narrative is traditionally designed in videogames as a secondary component to gameplay. While most videogames today contain the design components outlined throughout section 2.2 of this chapter, including the narrative components,

few seek to philosophically intertwine each element together in a way that gives the player a narrative context that benefits their gaming experience. As Onyett (2007) writes in his review of the game, “BioShock stands as a monolithic example of the convergence of entertaining gameplay and an irresistibly sinister, engrossing storyline that encompasses a host of multifaceted characters” (p. 3).

2.6 **Summary**

This literature review has summarised relevant and current knowledge in the field of game studies, industry and culture. Many concepts in game studies have been debated over the years, and there is now a shift in the way that theorists talk about videogames as multi-faceted media. This shift perhaps reflects the turning point in videogame development, which is beginning to design effective narrative when considering the interactive nature of gaming. For this study, videogames are considered to be artefacts as well as activities with embedded and emergent potential. As complex systems, videogames and their design can be approached in many ways. However, this study focuses on the investigation of just one type, the story-driven game.

Chapter 3. Methodology

This qualitative study analyses how the narrative of a story-driven videogame can be designed so that it is not subordinate to gameplay. The following sections will briefly outline each methodology followed by a discussion of how the methods will be implemented in the research.

3.1 **Mixed Methods**

A mixed-method approach is used to gain an understanding of integrated narrative and gameplay design in the story-driven game. Case study, formal analysis, and close reading methodologies have been selected to describe the subject of research and how that subject will be investigated. In this study the use of a case study frames how a formal analysis and close reading of the system (as an embedded artefact and emergent activity) will be implemented. Mäyrä (2009) suggests that "there is an inherent need for multi- and interdisciplinary collaboration in the area of game studies" (p. 319). This is because videogames are now being understood as multi-faceted media. Therefore, multiple methods are required to accurately investigate this complex form.

3.1.1 **Case study**

Creswell (2007) describes the case study as a method where "the investigator explores a bounded system […] over time, through detailed, in-depth data collection involving *multiple sources of information* […], and reports a case *description* and case-based themes" (p. 73). There are three types of case study research defined by Creswell (2007) as "collective", "intrinsic" and "instrumental" (pp. 74-75). A collective case study investigates many cases to illustrate an issue, an intrinsic study focuses on one case because it demonstrates a distinctive situation and an instrumental case study focuses on one issue and chooses an appropriate case to explain that issue. Case study as a single methodology is often criticised because it can lack context outside of the individual case explored (Flyvbjerg, 2006). However, Giddens (cited in Flyvbjerg, 2006) suggests that generalising subjects can be beneficial, especially when those subjects range widely. Although a case study cannot be the sole method used for data collection and analysis, it does offer a methodological framework that ranges from defining the subject of investigation to exploring a particular research field, such as design research. As Remenyi (2012) writes, "Case study research allows challenging research questions to be

addressed using multiple sources of data or evidence" (p. 2). Therefore, a case study approach can be understood as a starting point for researchers to build a specific methodology.

3.1.2 **Formal analysis**

Lankoski and Björk (2015) describe a formal analysis as "the name for research where an artifact and its specific elements are examined closely, and the relations of the elements are described in detail" (p. 23). Therefore, a formal analysis methodology explores the forms of a particular artefact. Fernández-Vara (2015) discusses two formal analysis approaches as "formalist" and "structuralist" (p. 16) where formalism explores the essential components of a text in an abstract way and structuralism applies rigid mathematical structures that exist beyond the text in order to understand its meaning. These approaches highlight two different methods that data is collected and interpreted. Therefore, it is fair to assume that while a formalist approach is better suited for qualitative research, which seeks to assess an issue with a wider range of considerations, the structuralist approach would better suit quantitative research that looks specifically at a given range of variables.

Fernández-Vara (2015) suggests that formal analysis methods stem from other research fields such as literature and film. According to Fernández-Vara (2015) a formal analysis of a videogame would therefore "refer to the system of the game and its components (the rules, the control schemes), as well as how the system is presented to the player (interface design, visual style)" (p. 16). When conducting a formal analysis of a videogame, the subject of study refers to the actual components of a system as well as the whole system itself. Although a formal analysis slants towards narratological research methods, Fernández-Vara's (2015) work suggests that gaming components can also be studied in this way.

3.1.3 **Close reading**

Bizzocchi and Tanenbaum (2012) describe close reading as "the detailed observation of a work, based on immersion into the piece sustained over repeated viewing, supplemented by the systematic notation of relevant details, leading to an explication and higher order analysis of the work" (p. 395). Put simply close reading is a method used to study the forms of a text many times to understand it better. In their article, 'Mass Effect 2: A Case Study in the Design of Game Narrative', Bizzocchi and Tanenbaum (2012) define their use of close reading as "a form

of textual analysis whose purpose is to uncover the design decisions manifest in representative artefact, and in the process to understand the effects of the design on the experience" (p. 395). Unlike the formal analysis, which specifically deals with the forms of an artefact, close reading also looks at the wider implications of those forms.

3.2 **Research Design**

In this research, an instrumental case study will serve as a methodological framework surrounding the formal analysis and close reading methodologies. A case study as an initial framework identifies the subject of investigation and loosely how that subject will be explored. Creswell (2007) describes an instrumental case study as the investigation of an issue, explained through an appropriate case study. The central research problem in this study concerns the secondary status of narrative in videogame design. The story-driven game selected to address this issue is *The Last of Us*, chosen in part because of its tremendous success in critical and cultural communities (see section 1.1) and also because the game appears to incorporate narrative distinctively from traditional game design.

While the case study frames a particular research issue by identifying an appropriate case, a formal analysis methodology helps to identify which major themes of the case will be investigated and a close reading method explores the wider implications. As a complex system, components of a videogame do not entirely exist independently but overlap at the point of game interaction. In *The Last of Us*, the major narrative and gameplay components, along with the player are not single entities of the one system but relate and inform one another throughout interaction and engagement. These major themes are often researched singularly in game studies[1]. However, to understanding how the overall gaming paradigm functions it is necessary to explore the themes and their relation to one another together. The narrative and gameplay design as embedded components in *The Last of Us* will be investigated by using a formal analysis method, which explores the story-driven game as an artefact (Figure 3.1). Secondly, in acknowledging the player as a crucial aspect of the gaming paradigm, a close reading of the emergent implications of the narrative and gameplay design decisions will be investigated (Figure 3.1).

[1] Articles such 'Mass Effect 2: A Case Study in the Design of Game Narrative' written by Bizzocchi and Tanenbaum (2012) and 'Origami Fiction: Psychological Horror in Interactive Narrative' written by Pérez (2014) focuses on narrative design and the interactive possibilities as oppose to incorporating the study of gameplay too.

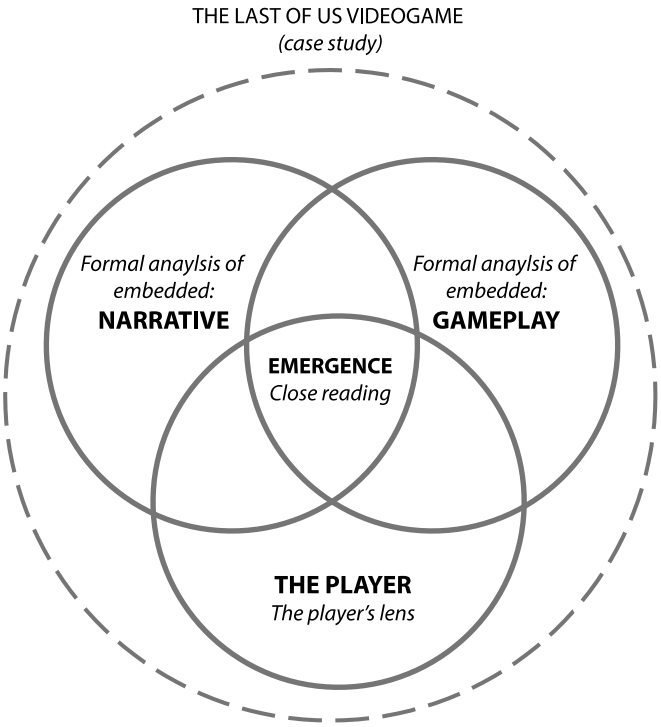

Fig. 3.1: Mixed-method: case study, formal analysis, and close reading
The analysis of embedded gameplay and narrative design will inform how emergence occurs through the player's lens.
Source: Cameron

3.2.1 **Major components of the game system: narrative, gameplay, and the player**

The embedded narrative and gameplay themes identified in Figure 3.1 each contain a number of designed components, which are illustrated in Figure 3.2. The narrative components that this study investigates are structure, devices and architecture. Moreover, the gameplay components that this study investigates are rules, goals and mechanics. While the embedded narrative and gameplay components are easily categorised, the player as a theme identifies the role that a player has in creating emergence and acknowledges the videogame as an activity. As the game player interacts and engages with the various components of the narrative and gameplay design, emergence happens. Although the player is not an embedded component of the videogame system, through interaction and engagement, they become a part of that system and the specific moments of play that create the overall gaming experience. Many theorists have identified the need to focus game studies research around player experiences. For example, Järvinen (2009) points out that "Video game studies should delve into more experimental areas of design an player experiences" (p. 85). Additionally, Juul (2011) explains that "very little has been said about the first-person experience of playing a game" (p. 10). Therefore, it is necessary to approach the investigation of narrative and gameplay design

through “the player’s lens”. In this study, the researcher is the player to enable accurate acknowledgement of the emergent implications of games design. The content of that emergence is not the focus here, but rather how it emergence is designed to happen.

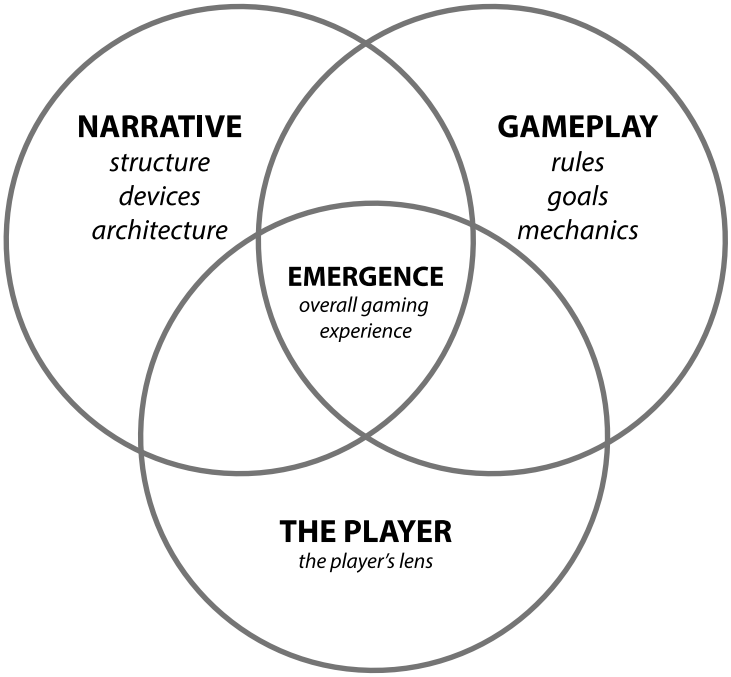

Fig. 3.2: Components of three major themes

Source: Cameron

3.2.2 **Data analysis**

The design components of each theme will be studied through the observation and note taking of one chapter in *The Last of Us* which will be played through multiple times to achieve accurate results. Since this case study is dealing with multiple large themes, only one small sequence of *The Last of Us* will be examined in-depth. The sequence selected, *Bill’s Town* incorporates a large variety of design elements found in the game and is therefore, a representational microcosm of how narrative and gameplay are designed throughout the entire game. In total, *The Last of Us* takes around twenty hours to complete (depending on the way it is played) so researching the game and all of the components entirely is not necessary for discussing specific design traits and the emergent implications they produce. Although *Bill’s Town* will be used for researching the game’s design, it is also important to acknowledge the system as a whole. Therefore, relevant sections outside of *Bill’s Town* will be focused on during analysis when applicable.

The language used in game culture communities when talking about videogames is focused on rigid designed components. Fernández-Vara (2015) discusses her experience in overhearing two people discussing a videogame and novel while waiting in a queue. She recounts the discussions on the game about great writing and minor graphical glitches that were balanced out with smooth gameplay where the novel was discussed with much greater detail like engaging characters, consistency of characters across books, surprising plot, and believable contemporary dialogue in a fantasy setting. She critiqued how the discussion about games "rated a laundry list of high level concepts of game reviews" (p. 1). This was compared to the way the novels were discussed by "using a much more specific vocabulary and providing arguments based on specific aspects of the novel" (p.1). While Fernández-Vara (2015) suggests that games should be studied as texts like other literary forms, a very important lesson can be applied to this and future research. The specificity, in which we discuss videogames and their forms, is important for understanding the game as an artefact and the context that surrounds them. It is therefore, necessary to focus on not only describing but also analysing each element with context to gain an accurate view on how a game is designed. In this case, the player's emergent implications provided a wider context.

An analysis of the narrative and the gameplay components that produce emergence as the player interacts will contribute to understanding how narrative can be constructed in a story-driven videogame so it is not a "tacked-on feature" (Crawford, 2005, p. 69). Researching these themes from the player's lens informs the way that data is analysed. Gillham (cited in Remenyi, 2012) suggests that observation can "be performed by collecting a variety of different types of evidence or data including numbers, text, images and other sensed stimuli" (p. 11). As a qualitative study, data will be analysed from each theme through repeated observations of the videogame as an artefact, repeated observations of the game as an activity and detailed note taking that inform both aspects of the system. The note-taking process will use Lankoski and Björk's (2015) "levels of descriptions" (p. 27). This breaks down specifically what is being examined in the formal analysis and close reading methodologies. Firstly by, describing the components and their relationships secondly, by describing the designed patterns and thirdly, by describing how the components and design patterns function in the game. Lankoski and Björk (2015) suggest that the components are the "building blocks of games" (p. 25). The first

point on the list above instructs the researcher to describe the types of components are in the game and how they relate. The second point instructs the researcher to describe how those components are designed. And the third, instructs the researcher to compare the relationships between them. Finally, this third point provides context for the formal qualities of the game to avoid simply stating what the components are and how they work. In this study, the contextual analysis uses the close reading methodology to assess the emergent implications that the designed narrative and gameplay components have on the player and gaming system as a whole.

A data analysis table will be used for the narrative and gameplay components where emergence is discussed as an implication of design. These themes and their role within the larger system will be researched by firstly asking *what* (component patterns) and *how* (design principles); followed by a discussion of the relationship between the two and how this influences emergence. Table 3.1 is an example of this data collection method.

Theme	**Component Patterns**	**Design Principle**	**Relationship**	**Emergent Implication**
Gameplay	*Rules*	*Rules are simple*	*Player can understand what their role is easily.*	*Creates agency allowing play to unfold smoothly resulting in effective emergent events*

Table 3.1: Data table
Source: Cameron

This mixed method approach was selected because the videogame needs to be revisited more than once to gain a comprehensive understanding of the way it functions. As a complex system, many points of engagement unfold in unique ways at the time of play. This mixed-method approach acknowledges the multifaceted gaming paradigm by firstly investigating the forms of a chosen case, then closely investigating and revisiting those forms and their implications for players. The following chapter will present the research findings from the narrative and gameplay design in *The Last of Us* and their emergent implications.

3.3 **Summary**

A mixed-method approach is used in this qualitative study to research the narrative and gameplay design and the emergent implications of that design through the player's lens. A formal analysis of the narrative and gameplay explores the embedded components from within the chosen case. The function of these embedded components, their relationships with one another and with the player is analysed. Furthermore, a close reading of the player's emergent implications because of the developers design decisions is explored. This mixed methodology investigates how narrative can be designed so that it is not a secondary component of the gaming paradigm.

> *A game* [...] *is a spreadsheet that has been convinced to sing and dance for you in the most outrageous way.*
>
> **— Jake Rodkin | Podcast Unlocked 264: Firewatch Developer Interview**

Chapter 4. Gameplay and Narrative design in *The Last of Us*

An argument held in videogame culture and studies has suggested that appropriating a passive form of engagement into an interactive medium threatens the qualities that make videogames unique. However, this study suggests that the issue with narrative in videogames is the way they have been designed in the past. The story-driven development trend over the past decade has demonstrated that videogames can harness narrative in a way that benefits players' gaming experiences as opposed to hindering them. Consequently, this study investigates the ways narrative can be incorporated into the digital medium so that it is not subordinate to gameplay, but supports the game paradigm in a unique way.

The following sections present the key findings of the narrative and gameplay design in *The Last of Us* by drawing from the *Bill's Town* chapter and other relevant sections of the game to illustrate how each component is developed. Firstly, the major components of each theme are presented throughout sections 4.2 and 4.3 to show the design patterns that make up the system. It is this vast collection of smaller patterns that determines how the complex system functions as a whole. Therefore, investigating these smaller patterns first will aid in understanding of the larger structure of the game. A discussion of how the larger game structure incorporates these components is presented in section 4.4. Throughout the discussion, narrative and gameplay are also investigated to understand their emergent implications based on the developer's design choices.

4.1 **Case Description: *Bill's Town***

Bill's Town represents the beginning of a series of challenges the protagonist, Joel and the player face to reach their destination and the overall game goal. In this chapter, the mechanics are still being gradually introduced, as is the discovery of new items but the structure of play is well-established. For a wider understanding of the game, see Appendix A for a full plot and chapter summary. There is also an index of terminology and character breakdowns in Appendix B to assist with understanding the smaller details of the game.

Fig. 4.1: Establishing shot in *Bill's Town*
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

The central goal in *Bill's Town* is to obtain a car to drive to Joel's brother Tommy, a former Firefly (a rebel organisation) who may know the location of their new medical lab. To find a car Joel and Ellie set out in search for Bill, a strange man who does not fit in well with the current military regime occupying the Quarantine Zones. Bill sets some traps and warnings (Figure 4.2) throughout his town to divert people, soldiers and Infected. Joel and Ellie must travel through this town and Bill's traps to find him.

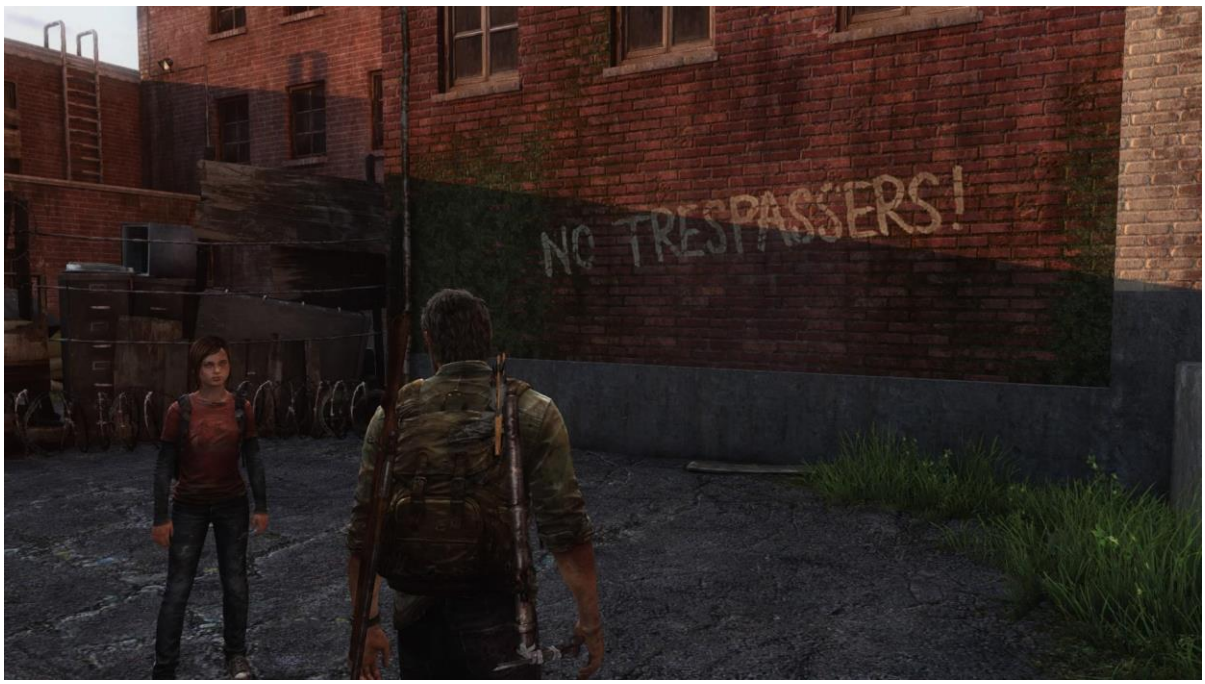

Fig. 4.2: Bill's warnings
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

After navigating through the main street, Joel steps into one of Bill's traps and is hanged upside down (Figure 4.3). The Infected start to run for the characters and the player must shoot them before they attack. Eventually, Ellie cuts Joel down but an Infected tackles him to the ground. In a twist of events, Bill shows up and saves the two taking Joel and Ellie through a labyrinth of back alleyways. After reaching a safe room, a cutscene is triggered where Bill questions why the protagonists are there. Joel explains that he and Ellie need a car. However, Bill laughs saying *"If I had a car, which I sure as hell don't, what makes you think I would give it to you?"* Joel pleads with Bill to do him this favour, and he reluctantly agrees. The issue now is with locating the necessary car parts. Bill suggests recovering a battery from a military van that recently crashed into the town's High School. However, the soldiers fled because the area was covered with the Infected.

The three set out across the town strategically avoiding and defeating Infected. After overcoming many challenges, they reach the High School to find that the battery has already been taken. Still in danger, the characters flee to a nearby house. Bill discovers his partner, Frank, hanged in the living room and is obviously upset. He instructs Joel and Ellie (and by association the player) to explore the house before they all move on. Ellie discovers the military battery in a car in the garage while Joel discovers an unpleasant note (see Appendix B) left by

Frank that blames Bill for his situation. Now in the garage the player can engage in additional dialogue with the characters. Engaging with Bill causes Joel to give him the note. Bill, unhinged by Franks blame throws the note on the ground. The three survivors then attempt to jump-start the car on a nearby hill while fighting off more Infected. When safe, Bill hops out of the truck to head back to his town and Joel attempts to speak to him about Frank. Bill dismisses him and the two parties carry on their separate journeys.

Fig. 4.3: Joel hanged upside down in Bill's trap
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

4.2 **Components of Narrative Design**

The following sections on narrative structure, devices and architecture present the key findings about the narrative design in *The Last of Us*. Each component examined contains a set of characteristics that represent the patterns of design. Investigating these patterns in the exemplary case contributes to an understanding of how narrative is developed in the story-driven videogame.

In *The Last of Us*, the narrative is the foundation on which the game is then built. While the narrative supports gameplay by utilising design patterns to guide the player through the game at a smooth pace that contributes to immersion in the act of play, these patterns also enable

immersion in the storyworld. The term “storyworld” here connotes an imagined realm that holds the fiction of a text. These fictive qualities assist the player to experience immersion in the narrative spaces of a game.

4.2.1 **Narrative structure: *The Hero’s Journey***

The Last of Us follows a minimalist[1] four-Act structure called *The Hero’s Journey* that sets up recurring themes about heroism, survival and the human condition. The plot is organised as other mediated forms similar to a film, novel or play where Acts signify different moments of *The Hero’s Journey.* Interestingly, these major plot events are embedded in the system and cannot be altered by the player. This design choice is unlike other story-driven games that allow the player to construct their version of the plot through dialogue choices.

Table 4.1 describes how each Act in *The Last of Us* has a specific story and gameplay function. The story functions in each Act contribute to the structure in a traditional sense by organising the narrative to guide the player through the story. The gameplay functions in a similar way by organising the gameplay to guide the player through the game. The use of both narrative and gameplay functions within each Act allows the player to construct the characters journey but also enables agency so the player can create their own emergent journey alongside the existing narrative. The player and system collaborate here to finish the game. For example, Act III represents the series of events that the character and player embark on (Table 4.1). While the characters face a variety of emotionally, physically and intellectually challenging circumstances, the player simulates these circumstances and experiences them through three different characters’ perspectives (those of Sarah, Joel and Ellie). The player is not solely responsible for constructing the events that make up the journey but collaborates with the embedded system that results in the player’s unique emergent play patterns. Collaborative play strengthens the immersive capabilities of the game. While the story functions in each Act to keep the player engrossed in the storyworld, the gameplay functions to keep the player engrossed in the act of play.

[1] A minimalist structure as McKee (cited in Majewski, 2003) describes has an open ending so that the audience is free to interpret what happens.

Act	Type of Act	Description	*The Last of Us*
Act I	*Exposition*	***Story**: Sets scene through background information.*	*Ch. 1*
		***Gameplay**: Introduces basic game mechanics*	
Act II	*Exposition/ Call to Action*	***Story**: Sets scene through background information, sets up the hero's journey.*	*Ch. 2 - 3*
		***Gameplay**: Introduces more complex mechanics, sets up the structure of play.*	
Act III	*Rising Action/ Climax*	***Story**: A series of challenging events that builds character-to-character relationships and leads to a final moment that changes the hero in some way.*	*Ch. 4 - 11*
		***Gameplay**: A series of challenging events that makes up the player's journey.*	
Act IV	*Resolution*	***Story**: Resolves conflict by summarising events.*	*Ch. 12*
		***Gameplay**: Because of the story, the player is forced to reflect on actions in the game that question what a hero is.*	

Table 4.1: Design patterns of the narrative structure: 4-Act *Hero's Journey*

Source: Cameron

Although these story and gameplay functions have separate purposes, they occur together in the system because of the way that the narrative frames gameplay. In *The Last of Us* the gameplay is intertwined with the narrative by entailing the story function of each Act. Because of this, the player can simulate the character's position inside the storyworld at the time of play. For example, in Act I the player firstly watches an intimate moment between Joel and his daughter, Sarah through a cutscene. Next, Sarah awakens in bed, and the player has space to use the mechanics for the first time. Since this is the first time the player is in control, *The Last of Us* sets mechanical parameters to introduce how the gameplay works slowly. In these first moments of Act I, the player cannot run and is only able to slowly search and interact with different items, which briefly sets up the structure of play. Here, the function of gameplay is to introduce basic game mechanics is justified through the story function to set the storyworld scene by simulating Sarah's perspective. Perhaps Sarah cannot run and is searching slowly

because she has just woken up. Perhaps she is also a little scared that Joel is not answering her, so she moves cautiously through the house. Sarah's uncertainty reflects back on the player's situation as a new participant in the game space. While preparing the player to use game mechanics, *The Last of Us* also creates tension about the narrative situation for both character and player as a result, building immediacy[2] between the player and the system.

The Last of Us also creates immediacy between the player and system by strategically shifting which character the player controls at a given time. Entering the game as Sarah is a deliberate design choice that sets up her relationship with Joel. Towards the end of Act I, Sarah is shot by a military soldier, which initiates the resentment Joel feels for the military operated Quarantine Zones and his general disregard for human connections. The player can immediately understand and empathise with Joel's past by experiencing background information through Sarah. The next shift in perspective is in the first climax in Act III. Joel is badly injured so Ellie heads off to hunt for food and medicine. As Ellie, the player encounters a group of men who offer her medicine in exchange for a hunted deer. Ellie ends up kidnapped by the group and Joel, who is still injured attempts to save her. Although the player controls Ellie for most of this chapter, the shift in perspective enables the player to understand Joel's fear for her safety, which contrasts with the beginning of the Act when he was distant with her due to his past. This shift in perspective allows the player to understand how Joel is beginning to transform into the hero by moving on from the guilt of losing Sarah. The meaning behind Joel and Ellie's relationship is mediated through the player so that the characters' positions are deeply understood and effectively simulated. Here, the player and characters collaborate together to create an immersive gaming experience, building immediacy between player and system.

Typically, in a story-driven game, the player is given a final momentous choice that solidifies the type of story told. Interestingly, *The Last of Us* does not give the player this choice despite there being three opportunities. In the final Act, once again, the player controls Ellie. Although there is little gameplay, it is Ellie's perspective that causes the player to question every choice they have made throughout the game. Towards the end of the game, Firefly soldiers unconsciously detain Joel and Ellie. After waking up in their Lab, Joel is told by Marlene (see Appendix B) that Ellie's

[2] Immediacy is a branch of remediation defined by Bolter and Grusin (1999) as "A style of visual representation whose goal is to make the viewer forget the presence of the medium" (p. 272). The goal for immediacy is to bridge the gap between viewer and interface.

brain will need to be dissected for science, resulting in her death. Since the player experiences majority of the game as Joel, his actions are unquestioned by the player embodying the heroic protagonist. There is no hesitation in playing through the final Act and killing any Firefly soldier that threatens Ellie's life. At the end of Act III and beginning of Act IV, a cutscene switches between past and present showing Joel (not enabled by the player) shooting Marlene and saying, *"you'd just come after her"*. Joel's action here represents his transformation and redemption because he goes to extreme lengths to save Ellie in contrast to his inability to act for Sarah. Arguably, saving Ellie is how Joel appeases his own guilt, but at what cost? Ellie questions Joel about what happened at the lab and confronts the player with the reality of the game's content. Ellie is not only questioning Joel's actions, she also questions the player's actions. These shifts in perspective throughout the game (as Sarah, as Joel and as Ellie) unlock wider ideas about the character's experiences and humanity as a whole. This conclusion suggests that being good or bad really depends on who is telling the story. Taking away the player's final decisions solidifies *The Last of Us* as a collaborative gaming event requiring the player to construct moment-to-moment events alongside the embedded system for the character's story to be told.

4.2.2 **Narrative devices**

Narrative devices are characteristics of the narrative structure used as communicative tools to guide the player through the game and story. The design patterns that are investigated here are dialogue, cutscenes, and point-of-view. Like Acts, each device supports the story and gameplay in different ways as Table 4.2 indicates.

Device	**Description**	**Example**
Dialogue	***Story:*** *Contributes to storyworld.*	*"Look! Fireflies"*
	Gameplay: *Frames gaming instructions.*	*"We gotta find another way around"*
Cutscenes	***Story:*** *Used as rewards, to introduce or conclude sections of play.*	*Major or minor cutscenes*
	Gameplay: *Smoothly transition in play moments.*	*Functional cutscenes*

Point-of-view	***Story:*** *Third-person: Character.*	*View of character*
	Gameplay: *First-person: Storyworld.*	*View of world*

Table 4.2: Narrative devices
Source: Cameron

4.2.2.1 **Dialogue**

In *The Last of Us*, dialogue is used when the characters talk to themselves or have conversations with each other. Although characters do not directly address the player, the latter is included in the subject of dialogue through gameplay. Gameplay oriented dialogue is in place to guide the player through the game with directions or instructions that are contextualised by the storyworld. In *Bill's Town* for example, Joel and Ellie approach a locked gate. Ellie asks Joel *"Shall we climb it?"* and Joel responds *"No there's wire on the top, we gotta find another way to go around"*. This exchange quite literally tells the player that the locked gate is not the way to enter the fenced area, which sets up the next moment-to-moment goal. Presenting gaming instructions through dialogue not only keeps the player immersed in the storyworld it also reinforces immediacy between the player and system. Throughout play, gameplay dialogue consistently motivates the player by reinforcing objectives that allow the game to unfold at a smooth pace, so the player is rarely left wondering what to do next. Subtle instructions are used in this way throughout the game, which increases the rate that tasks are completed.

Narrative oriented dialogue is used throughout the game to develop the characters' identities when they talk about subjects outside of the gaming objectives. After the player learns from Joel that the gate is locked and cannot be climbed, they begin to navigate around the fence to find another entry point. At this moment Ellie, positioned behind Joel, shouts *"Look! Fireflies!".* This line of dialogue helps to develop Ellie's personality. However, the full line is only triggered if the player turns back to look at her. If the player engages with her she adds "*… I mean real fireflies"* suggesting that it is optional to engage further with the story. However, triggering this dialogue can also be entirely up to chance. Did the player hear her? Did the player find what she said interesting enough to stop focusing on the game task for a moment? The idea of chance

creates the impression that the environment is dynamic and responds to the player's specific movements or actions in the space.

Another form of storyworld dialogue that is designed deliberately for the player to choose whether or not to engage is described as additional dialogue. An icon pops up on screen that, when pressed triggers the character to speak. An example in *Bill's Town* is when the player can trigger additional dialogue with Ellie about a friend she once knew. While triggered dialogue establishes the character's identities, it also builds the relationship with other characters and by association, the player. As Ellie tells Joel about her past, she is also telling the player so that their relationships are built at the same time. These opportunities for wider understanding of the characters suggests that they have experiences beyond what the game shows that create a believable storyworld within which players can immerse themselves into.

4.2.2.2 **Cutscenes**

Cutscenes in *The Last of Us* do not exist as single facets in the game. Instead, they are broken down into focused sequences for specific purposes. Like the other characteristics of narrative design, cutscenes also have a narrative and gameplay function (Table 4.3). Throughout the cutscenes, handheld camera techniques remediated from film are used so the player is connected with space through immediacy. A shaky camera gives the illusion that the viewer is closely connected with the events on a personal level.

Major and minor cutscenes resemble typical filmic sequences. Although these cutscenes connect play sequences, they can also occur within play depending on the unfolding plot. Major and minor cutscenes are in place to connect the larger plot events (usually conversations) in a way that concisely concludes and introduces the play sequences. These cutscenes reinforce the game goal for the next sequence so that the player is constantly aware of what they need to do.

These story-oriented cutscenes are also used as rewards and breaks to separate sections of the game. The onslaught of different enemies with different combat characteristics and the dynamic unfolding of fast-paced action sequences, combined with elements of the horror genre building up fearful scenarios, could become overwhelming. Although *The Last of Us* does not have particularly challenging gameplay mechanics, like other videogames, these action-filled

situations that often occur towards the end of a pearl or chapter can become stressful, depending on the difficulty settings. There is a small moment of relief where the characters' appear safe after fighting through many different Infected enemies in a play sequence titled *High School Escape*. This is until a relief the first Bloater of the game (a type of Infected; see Appendix B) appears that the player cannot flee from. After defeating this unknown challenge for the first time, a break from gameplay is welcomed. However, instead of the player pausing the game in order to have a break, which risks interrupting immersion in the storyworld, the game shows the player a cutscene and a piece of the story that is relevant to the play sequences.

Cutscene	**Description**	**Example**
Story:		
Major	*3 – 4 minute sequences that introduce or conclude gameplay sequences are used as a break / reward.*	*Cutscene connecting The Woods and Safehouse*
Minor	*1 – 2 minute sequences that introduce or conclude gameplay sequences are used as a break / reward.*	*Final cutscene in Bill's Town*
Functional (gameplay):		
Directive	*Direct the player.*	*Triggered cutscene in The Woods looking over Bill's Town*
Movement	*Show the character's movement triggered by the player.*	*Showing Joel hoist Ellie up over a fence in The Woods*
Object	*Show the player important items to the player.*	*Joel picking up new items*

Table 4.3: Cutscene breakdown

Source: Cameron

Functional cutscenes that support gameplay include directive, movement and object scenes. These small scenes are scattered throughout a play sequence to ease the transition of play moments so that the game unfolds at a smooth pace. For example, movement cutscenes show the player the results of their actions in a steady and controlled format. However, functional cutscenes can also be used to communicate important information to the player. While directive cutscenes direct the player where to go, object cutscenes inform the player of new skills they can use. In the *Safehouse* play sequence; Bill introduces Joel to his invention - a nail bomb. An object cutscene is triggered when picking up this new weapon where the player observes Joel

looking at the bomb. This cutscene is a way of informing the player that they can now "craft" [3] these weapons. Tutorials that overlay the storyworld can also communicate this once Joel has picked up the item however, this is dependant on the settings set by the player. By breaking down cutscenes to serve different purposes throughout the game, the design recognises that players engage with a game in multiple ways, using each cutscene to aid what is needed at the time of play.

4.2.2.3 **Point-of-view**

The third narrative device is point-of-view, which is an aesthetic perspective in the videogame. Like the other narrative design patterns, point-of-view has story and gameplay functions. *The Last of Us* is considered a third-person game because the player can physically see the character from a third-person view. Videogame characters are usually positioned at the centre of the screen with the camera fixed behind them. However, in *The Last of Us*, the character is fixed slightly to the left of frame (Figure 4.4). This third-person view of the character represents the story function because it suggests that the character is the character and is enabled by the player.

However, as in most modern videogames the player can also move the camera as well as the character. Since the character is positioned slightly to the left of frame, the player gains an immediate perspective when given his own view of the storyworld. This first-person view signalled by the space on the right represents the gameplay function because it suggests that the player is also an active participant inside of the storyworld that the characters occupy. The ability to manoeuvre the camera through a first-person perspective gives the player his or her own identity in the game. The use of these two perspectives reinforces progression through the story and game as a collaborative effort. While the player is enabling Joel, they are also able to take part in the storyworld directly.

[3] Crafting is a term used in a lot of videogames and simply means to make or build something. Crafting an item in The Last of Us lets players collect a range of different items to build useful supplies or weapons from.

Fig. 4.4: Character (left), camera (right)
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

4.2.3 **Narrative architecture**

Narrative architecture refers to the way a game environment is built to sustain interactivity. In *The Last of Us*, the macro-narrative architectural model[4], spanning across the entire game is the "String of Pearls". The String of Pearls transfers the linear four-Act *Hero's Journey* narrative structure into an interactive gaming environment (Figure 4.5). In the string of pearls, "strings" typically represent cutscenes (major or minor) that connect play sequences or "pearls" together. In *The Last of Us*, the four Acts of the narrative structure contain twelve chapters categorised by location. These chapters then contain 29 pearls, breaking down the plot into play sequences. Moving through each chapter and pearl constitutes the characters and player's journey.

[4] A macro-narrative model spans across the entire game. The distinction between smaller, micro-narrative structures is necessary because a similar *pearl - string - pearl - string* format also occurs within each pearl.

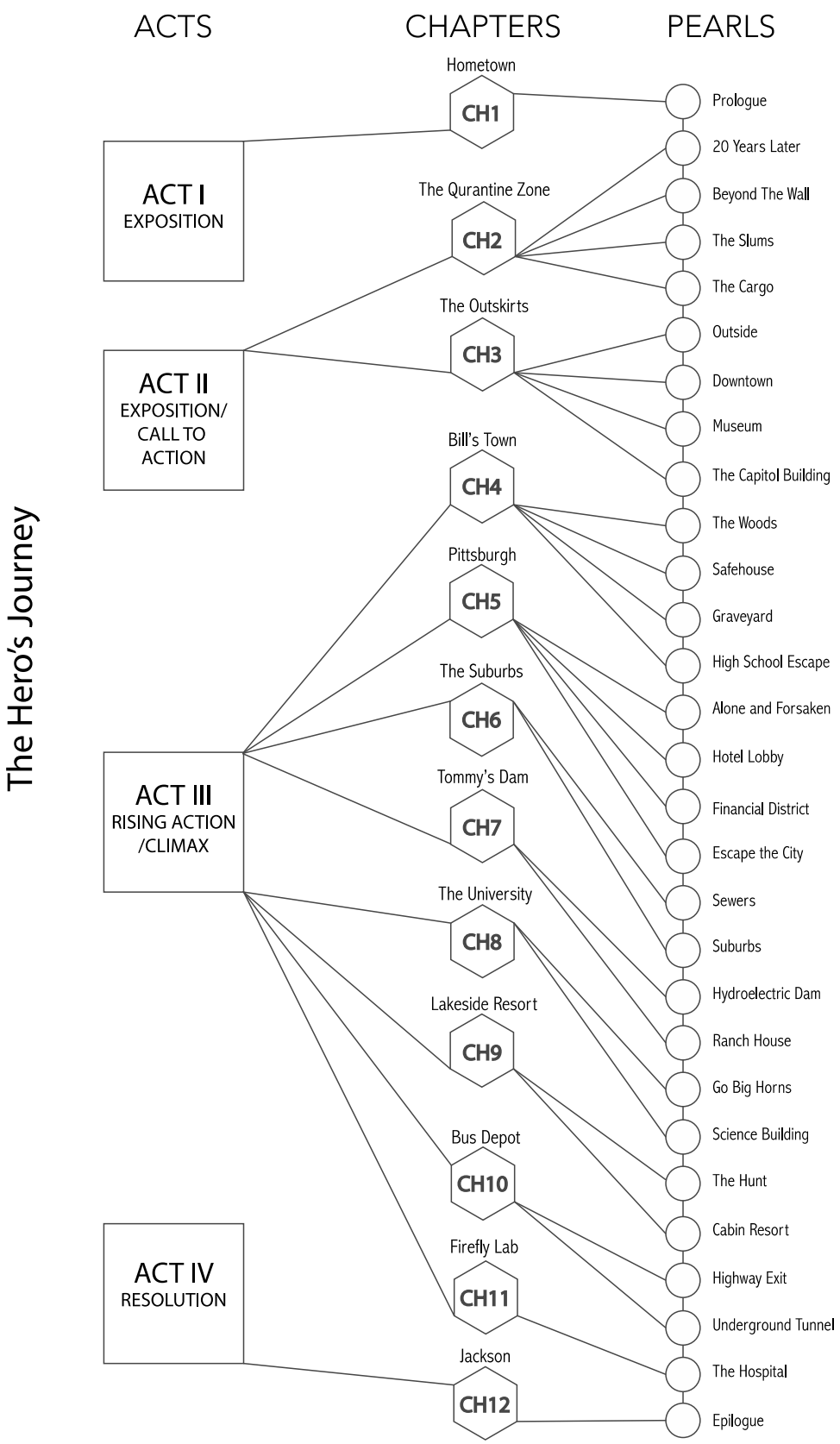

Fig. 4.5: *The Hero's Journey* four-Act transferred into the "String of Pearls" game structure

Source: Cameron

Players *enter* the string of pearls by firstly encountering a cutscene (string) that introduces the storyworld and contextualises play. This is followed by a play sequence (pearl), which mimics the linear macro-structure with set tasks then actions performed by the player (*task–action–task–action*). Finally, when players reach the desired *exit* point of a pearl another cutscene is triggered that connects the next sequence, and this pattern repeats until the game ends. As Majewski (2003) suggests, the easiest way for game designers to transfer a linear narrative into a nonlinear environment without sacrificing control over the plot is to construct the story behind an interactive illusion. While *The Last of Us* does abide by this illusion with fixed entry and exit points within each pearl, the game does not exclusively follow the classic *"task–action–task–action"* format. Interestingly, the micro-narrative environmental structure in each pearl comprises multiple architectural influences. As Table 4.4 indicates, a combination of the Branching Path, Building Blocks, Amusement Park, and a micro-String of Pearls (task–action) narrative architecture models create an environment that enables different types of interactivity.

Architecture	**Description**	**Example**
Branching	*Physical play pathways in the environment that describe where the player can travel.*	*Game maps with various pathways that reach the same end creating an open world illusion*
Building blocks	*An expansive environment incorporating different optional content to explore.*	*Game maps with various content to engage with, creating emergent potential according to player's choices*
Amusement	*Play structures and mechanical variety allowing agency to approach challenges/ engage with content*	Environmental challenges, Infected Challenges, extra items in space, triggered dialogue
Micro-string of pearls	*The forward momentum of general gaming events propel forward.*	*A fluid structure that helps to propel events forward linearly. The micro-string of pearls refers to the way that gaming events move forward once they are completed*

Table 4.4: Narrative architectures

Source: Cameron

Each architectural model encourages the player to engage and interact with the game in multiple ways that often occur at the same time. Furthermore, multiple architectures encourage nonlinearity in an otherwise linear game. Together, each architectural influence creates an open-world[5] illusion. This illusion simulates the benefits of a nonlinear open-world environment

[5] An "open-world" otherwise known as "sandbox games" refers to a game that gives the player a vast space, perhaps containing a number of optional tasks, and an antagonising threat. The order of tasks is up to the player to complete. An

in a videogame because the player's choices *seem* to influence the trajectory of the plot, even when they do not. While the macro-structure in *The Last of Us* is standard for a linear adventure videogame, it is the mixture of architectural models within each pearl that enables the "framework of emergent potential", described in the following section. The following section will present the findings of the gameplay design in *The Last of Us*.

4.3 **Components of Gameplay Design**

Gameplay is the interactive tool which players physically and cognitively use to participate in a game. In *The Last of Us* gameplay content is contextualised through the storyworld where the players perform tasks set inside the game's fictive environment. The act of play is therefore set inside a narrative space. Like in the first Act where there are mechanical parameters around play, the specific moment in the story requires that gameplay is restricted to suit the storyworld situation.

At the beginning of the game, rules and mechanics are gradually introduced so that the player can perform actions from a library of tools rather than performing specific actions at a specific place in the environment and at a specific time. This idea allows for emergent potential in the expansive framework. Players can adapt to unfolding situations according to their individual circumstances, which creates a meaningful system. In this sense, meaning refers to the player's actions affecting the system's responses to the player's input.

While the narrative design enables a game environment within which the framework of emergent potential can exist, the variety of gameplay content that can be interacted with in a number of ways makes up the framework itself. The major components of the gameplay design examined here are the rules, goals and mechanics. Each component examined contains a set of characteristics that represent the patterns of design. The following sections will present the key findings of their design patterns. Investigating these patterns in the exemplary case contributes to an understanding of how gameplay is built in the story-driven videogame so that narrative is not a subordinate component of design.

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open-world game allows players to have control. However, there can be immersive difficulties with little pre-programmed motivation.

4.3.1 **Rules**

Rules set up parameters around play and instruct the player what they need to do to complete a game. There are three main rules in *The Last of Us*, which are *to navigate*, *to explore* and *to address challenges* (Table 4.5). Like the narrative components, gameplay components function on multiple levels because gameplay is contextualised through the storyworld.

Although the premise of these rules is very simple, the combination of all three rules enables the player to interact in different ways. While each rule exists singularly, they are also layered and intertwine throughout play so that more than one rule can be abided by at a given time. While navigating, players can find new environments to explore and the supplies needed when addressing the many challenges. Additionally, players can perform maintenance tasks such as using a health kit or reloading their weapon while they are performing rules, thus building an environment that accurately simulates how the characters would approach situations if they were real.

Rules	**Description**	**Example**
Navigate	***Gameplay:*** *Search through the environment to reach fixed entry and exit points.*	*Enter: walk through The Woods* *Exit: Walk through a door held open by Bill*
	Story: *Describes what characters need to do to complete journey.*	*Find specific people or specific locations*
Explore	***Gameplay:*** *Search through the environment to find supplies to address challenges.*	*Supplies for crafting, ammunition*
	Story: *Search through environment to survive and find special items.*	*Special items such as letters left by other survivors*
Address Challenges	***Gameplay:*** *Overcome obstacles that are in place to interrupt play.*	*Environmental, Infected, or human challenges*
	Story: *Overcome obstacles so that characters are not in danger.*	*Environmental, Infected, or human challenges*

Table 4.5: Rules

Source: Cameron

The first rule, *to navigate,* supports linearity in the string of pearls macro-architecture through its gameplay function. In each pearl, the overall task outside of the storyworld setting is to reach specific entry and exit points set by the developers. The first entry point in *Bill's Town* is through *The Woods*. The player navigates through a small forest, traveling down different paths to locate where the town and eventually find Bill. The exit point in this pearl is through a door when the characters run away from the Infected after Bill had saved them. Since these entry and exit points are tied in with the plot, they are fixed in the game's environment. Therefore, navigation, as a rule, is in place to drive linear play as the story to unfolds. Navigation is contextualised through the storyworld because the player isn't aware of the specific entry and exit points. These points in the game are often framed as people or locations in the storyworld environment.

Although the main navigational role is to progress through the game and story linearly, environmental challenges are in place throughout the entire journey to obstruct this linear play. These environmental challenges start small and become increasingly difficult as the game goes on. Navigating through the environment means to figure out how the player can use the tools around them to continue, which simulates a real life navigational experience. Furthermore, Ellie is not just a plot device but is incorporated into the game by helping Joel (and the player) to navigate through the environment. Throughout the game, Joel props Ellie above gates to open from the other side or Ellie crawls through small spaces that Joel cannot fit. Ellie's usefulness is reinforced when she (and the player) is compelled to save Joel.

The second rule, *to explore* encourages the player to travel down non-linear pathways, contributing to the open-world illusion. In *The Woods* pearl, when navigating down different pathways, the player finds a set of supplies scattered around a dead end. This suggests that more items can be discovered in the space. Given this information, the player can choose whether to continue travelling along the linear trajectory of the plot or to veer away from the central story-oriented goals to find more supplies or items. From a gameplay perspective, finding supplies is necessary to complete challenges. This rule is then contextualised through the storyworld's survival theme. Finding special items also contributes to a believable storyworld because it offers a wider scope to imagine other survivors in the game.

The third rule, *to address challenges*, gives players a reason to explore. Players are encouraged to explore, as there are a variety of challenges with different characteristics that require unique methods to overcome. Items can be crafted into health kits or specialised weapons that give the player a larger variety of choices when addressing challenges, which increases their chances of progressing. While exploring allows players to branch away from the linear pathways in the game, the *need* to craft and find supplies to address challenges further motivates nonlinearity. The gameplay function of this rule is to overcome any challenge that obstructs play. This is again contextualised through the storyworld because it is assumed any challenge that threatens the character's safety must be overcome or defeated which reinforces the survival theme.

4.3.2 **Goals**

Goals are tasks and objectives that need to be completed so that the player can progress, and the game and story can unfold. Like cutscenes, goals are broken down in *The Last of Us* with narrative and gameplay functions (Table 4.6). These broken down goals are layered throughout the system, where completing the smaller goals will contribute to completing the larger ones. Like the other gameplay components, goals are contextualised within the storyworld by providing motivation, which is communicated through dialogue or triggered by gameplay cutscenes to drive play forward at a smooth pace so that the player remains immersed.

Goals	**Description**	**Example**
Story-oriented:		
Macro	*Broader goals about major plot events that span across chapters*.	***Bill's Town Macro-goal:*** *Obtain a car*
Micro	*Focused objectives that span over pearls in a chapter and which contribute towards achieving the macro-goals.*	***The Woods Micro-goal:*** *Find Bill, so that Joel and Ellie can obtain a car*
Gameplay-oriented:		
Moment-to-moment	*Specific and urgent tasks, which emerge out of play and that need to be addressed to achieve micro and macro goals.*	***Safehouse m-t-m goal:*** *Stock up on supplies for upcoming challenges*

Table 4.6: Goals

Source: Cameron

The macro and micro goals are story oriented and centred around plot events. Achieving story-oriented objectives will contribute to the unfolding plot in a small or large way. In *Bill's Town*, the macro-goal is to obtain a car (Table 4.7), which serves the larger plot events because the characters need a car to travel to Joel's brother, Tommy. To achieve this, micro-goals are layered on top of the macro-goal. The first micro-goal in *Bill's Town* is to find Bill. Once this goal is achieved, new micro-goals emerge according to the unfolding action. When the characters find Bill, he explains that the issue sourcing a car is the battery. However, as luck would have it a working military van recently crashed into the town's High School. The micro-goal then transforms into "obtaining the battery" (Table 4.7).

Goal Type	Goal in Bill's Town (narrative context)
Macro-goal	**Find a car to drive to Tommy**
Micro-goal 1:	*Find Bill so that Bill can give Joel a car*
M-t-M goal 1:	Find Entry point into Bill's Town
M-t-M goal 2:	Navigate the town while avoiding Bill's traps
M-t-M goal 3:	Defeat Infected
M-t-M goal 4:	Run from Infected
Micro-goal 2:	*Obtain battery from military van*
M-t-M goal 5:	Stock up on supplies
M-t-M goal 6:	Navigate through suburban streets, defeating Infected
M-t-M goal 7:	Defeat more Infected (including Bloater)
M-t-M goal 8:	Escape Infected
Micro-goal 4:	*Push car to start while defeating Infected*
Macro-goal:	**COMPLETE**

Table 4.7: Goals in *Bill's Town*
Source: Cameron

Within these larger goal structures is a range of moment-to-moment goals that represent specific or urgent gameplay tasks that need to be achieved along the way to completing the larger story-oriented goals. In the *Safehouse* pearl, for example, the moment-to-moment goal is to stock up on supplies for the upcoming challenges (Table 4.7). This moment-to-moment goal is achieved by collecting the supplies in the area that spans across the entire pearl. The way that new tasks unfold shows that the player is always aware of what their role in the story and game is, which increases the rate that tasks are completed. This keeps the player immersed in the act of play.

4.3.3 **Mechanics**

Mechanics focuses more so on contextual and gameplay mechanics as opposed to physical mechanics (pushing a button) to understand how players can manipulate scenarios in *The Last of Us* with the interactive tools available. This section briefly describes the character's abilities, the types of challenges in place to obstruct play, and how the player can utilise those abilities to overcome different challenges.

The spatial logic in *The Last of Us* environment resembles real-world physics since the characters move and function in a realistically. The characters abilities entail the logic of this realistic representation by running, climbing, jumping and shooting a weapon as ordinary humans do. However, the game does incorporate fictive abilities that simulate realistic abilities in real life even if they are hypermediately represented. There is an optional mechanic called "listening mode" (Figure 4.6), which lets the player see where enemies are in relation to the character. Although this gives the characters extra-sensory abilities in the game, it simulates the ability to hear sound in a three-dimensional environment and gauge where that sound is coming from. Listening mode rather simulates the idea of hearing where enemies are as if the player was in the narrated space which contributes to immersion in the act of play.

Fig. 4.6: "Listening mode"
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

Players use mechanics such as listening mode, to overcome challenges that obstruct them from progressing. There are three types of challenges in the game that can be described as environmental, Infected, and human. Challenges occur sporadically throughout the chapters according to the plot. In *Bill's Town*, there are environmental and Infected challenges. An environmental challenge, for example, is the use of tripwires set up by Bill. These exploding wires pictured in Figure 4.7 can be defeated in a number of ways that contribute to the many interactive avenues in the framework of potential. When addressing these tripwires, the player can find an alternate pathway, crawl under the wire if there is space, or forcibly detonate the tripwires from a distance using a weapon or found item (like a brick). The appropriate choice is up to the player or their circumstance at the time of play.

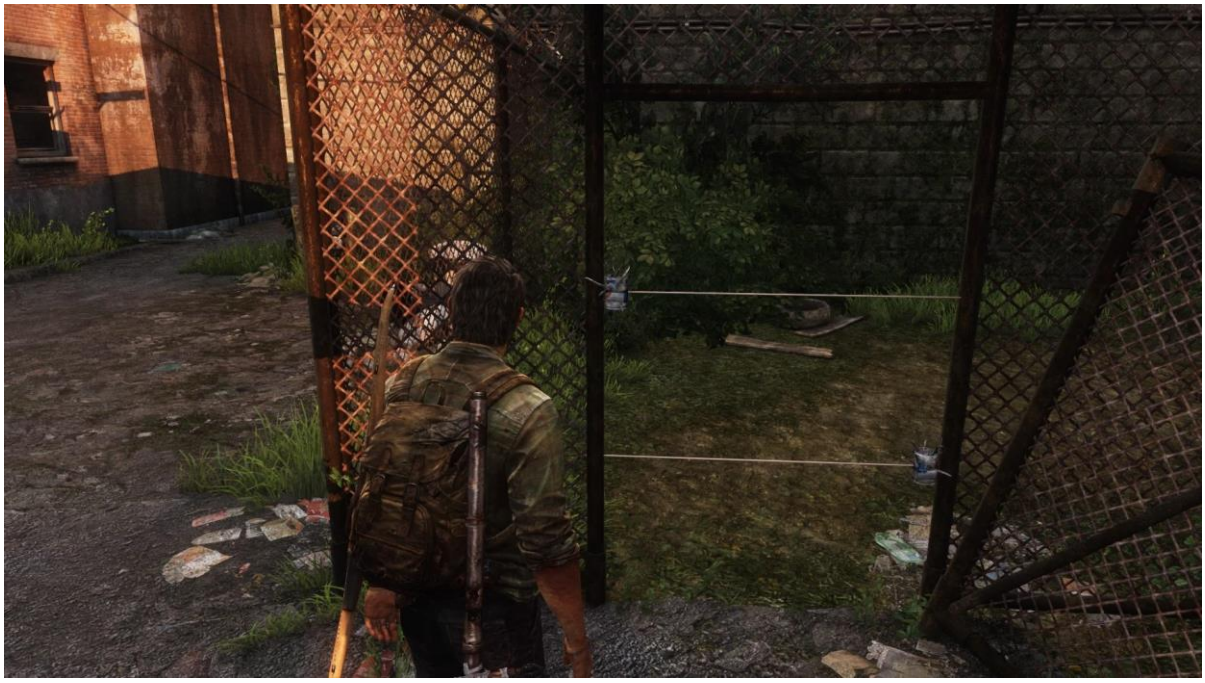

Fig. 4.7: Tripwires
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

Environmental challenges like this make up a large portion of gameplay scenarios in *The Last of Us*. Although they can seem relatively subdued compared to other Infected or human challenges that are more about fast-paced shooting action sequences, they offer the player a different form of engagement with the game. Environmental challenges occur as spatial puzzles that are solved cognitively while navigating. Although some of these challenges can be approached in multiple ways such as the tripwire example, others have a specific solution. However, the methods for achieving this solution can unfold and still produce individuated,

emergent play patterns because of the way that different players engage with the challenge. These environmental challenges can occur in the game as planks of wood or large bins that need to be strategically placed in the environment to progress. While these challenges are simple, they serve the player by offering different forms of interactions that break up the fast-paced action sequences to keep play interesting, while supporting the storyworld.

Contextual Mechanics	**Description**	**Example**
Strategy	*Stealth*	*Sneak up and attack*
	Offensive	*Attack first as a defence*
	Avoidance	*Avoid enemy altogether*
Combat Method	*Distance*	*Use distance weapon i.e. gun*
	Hand-to-hand	*Fist fighting*
	Melee	*Attack with handheld weapon*
Weapons	*Guns*	Pistol, Hunting Rifle, etc.
	Silent/crafted weapons	Bow and Arrows, Shiv, etc.
	Bombs	Nail Bomb, Molotov

Table 4.8: Gameplay mechanics
Source: Cameron

Because of the multifaceted narrative environment and simple rule structures, there are a variety of strategies, combat methods, and weapon choices that the player can use dynamically when addressing the many challenges available. Having a variety of different mechanical options creates a meaningful and consequential system where the system adapts and responds to the player's input. Furthermore, the array of variables surrounding play allows the player to construct their own emergent play patterns; and as a result, the events which make up the

characters and player's journeys. Table 4.8 above describes the mechanical options a player can use to shape the way that challenging encounters unfold.

The rules in *The Last of Us* determine the kinds of supplies a player collects (e.g weapons, ammunition, crafting items) and these choices affect the way that more complex challenges are approached. Furthermore, since different types of Infected (see Appendix B) have different physical characteristics, they require different strategic, combat and weaponry tactics to defeat. "Clickers" for example, are blind due to large fungal plates that grow over their heads, but they can hear very well using echolocation. While this makes them easy to avoid, the fungal plates mean they cannot be defeated in hand-to-hand combat. Figure 4.8 illustrates the amount of strategic, combat, and weaponry possibilities available when approaching a Clicker. There are also ranges of environmental factors when approaching Infected. These factors include whether the character is discovered by the Infected first; whether the player uses a loud weapon that could draw more Infected to the area; how many there are and what different types of Infected are in the one area. These are the situational variables that allow the player to construct their own emergent play patterns. In the *Graveyard* pearl, there is a section with a variety of Clickers and Runners emerging from all-different directions. In this situation, it would be unwise to use a loud weapon, at the same time; silently taking down enemies must be accomplished without being seen. Failing an initial strategy in the *Graveyard* poses a further, improvisational challenge for the player. The sheer number of content options in each situation that is further influenced by the player's choices at previous sections of the game produce dynamic play encounters that create a meaningful consequential system.

Additional stress is put on these high-pressure encounters because it is unclear when a challenge ends throughout each pearl. While the game does include specific challenges with a clear beginning and end, in most cases it is entirely possible for the player to progress without actually defeating all enemies (or so it seems). It is not made clear when all Infected or human enemies have been dealt with which effectively simulates the character's situation and creates a sense of urgency and danger throughout the game.

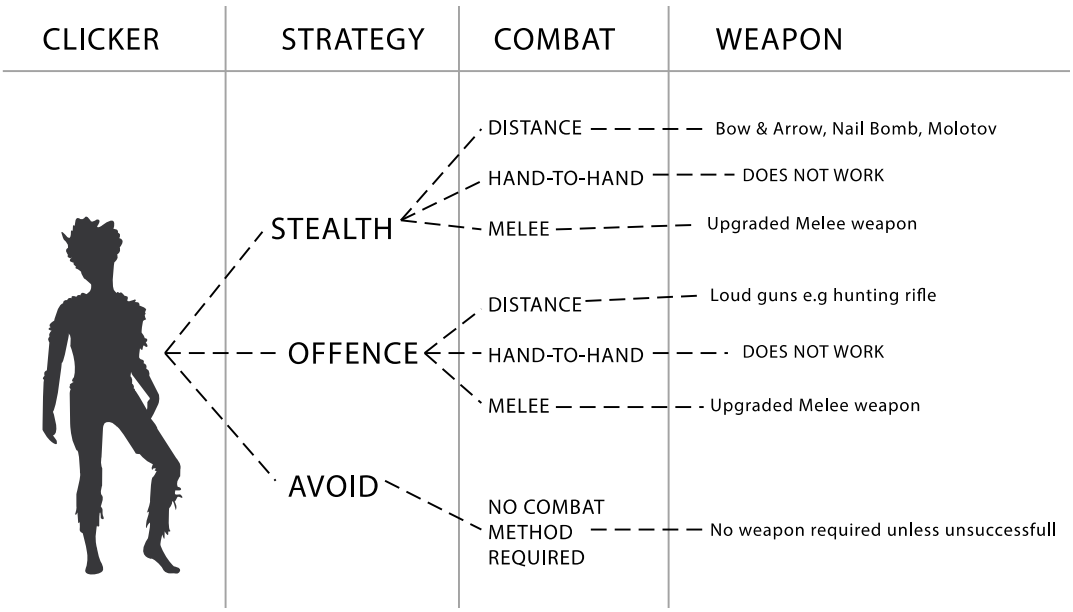

Fig. 4.8: Decision breakdown when approaching “Clickers”

Source: Cameron

4.4 **Integrative Structure of Narrative and Gameplay Design and the Emergent Implications of Design Decisions**

The design patterns from the narrative and gameplay design in *The Last of Us* are complex and use a vast collection of strategies to provide players with an immersive gaming experience. Each component supports the other in a way that benefits the narrative capabilities in the game. It is not only the characteristics of these design patterns that contribute to an impressive system, but also their integration and layering throughout play. The four pearls in *Bill’s Town* are categorised into locations that reflect places from *The Hero’s Journey*. Since play in *The Last of Us* is organised by location, the game is created from the journey-oriented narrative structure.

Structurally, pearls are influenced by a mixture of different architectural models closely linked to the rules of the game. This multifaceted environment enables a framework that combined with the large variety of mechanics and content can produce dynamic emergence according to the player’s choices. Throughout the close reading research process, play patterns within each pearl begin to emerge demonstrating how *The Last of Us* structures the narrative and gameplay components in the moment of play. Rather than using a traditional “*task–action–task–action*” (discussed in section 4.2.3) format that flows in a “*stop–start*" motion, components and their

design patterns are layered. This causes them to intertwine and overlap when the game is played which supplements both the story and the game together.

A coding system was devised that conceptualises the layering of various narrative and gameplay design patterns showing how the two seemingly conflicting elements are integrated. Table 4.9 presents most of the codes used to mark different encounters. It is worth noting, that certain components are not coded because the player does not directly encounter them. The narrative structure, for example, spans across the entire game and is not a facet of interaction but makes up the foundation of the game and storyworld. Similarly, game goals are not physical content in the games environment but span over play. However, goals can be expressed through dialogue or cutscenes indicated with an asterisk. Table 4.9 can be used to understand Figure 4.9, a diagram of *The Woods* pearl that codes the unfolded play patterns of one play-through in *The Woods*.

Content	**Type of component**	**Description**	**Code**
Navigate	*Rule*	*Travel through environment to find people or location*	N
Explore	*Rule*	*Search through environment to find supplies or items*	Ex
Supplies found	*Content*	*Supplies such as ammunition, crafting items*	SF
Items found	*Content*	*Letters, maps, photographs of other survivors*	IF
New Weapon	*Content*	*The discovery of a new weapon not yet used*	NW
Address challenges	*Rule*	*Challenges in place to obstruct play to continue*	AC
Infected challenge	*Content*	*Humans infected with cordyceps fungus*	IC
Environmental challenge	*Content*	*Puzzles, tripwires*	EC
Gameplay dialogue	*Narrative device*	*Communicating game instructions to player via dialogue*	gpD
Storyworld dialogue	*Narrative device*	*Additional information outside of gaming objectives*	swD
First-person point of view	*Narrative device*	*Player is primarily in control of storyworld view*	f.pov
Third-person point of view	*Narrative device*	*Player's view is restricted, fixed on character*	t.pov
Major cutscene	*Narrative device*	*Introductory or concluding scenes about major plot events*	MajCS

Minor cutscene	*Narrative device*	*Introductory or concluding scenes about minor plot events*	MinCS
Directive cutscene	*Narrative device*	*Directing player of gaming instructions*	dCS
Object cutscene	*Narrative device*	*Showing player collected item*	oCS
Movement cutscene	*Narrative device*	*Showing characters movement*	mCS
Triggered	*n/a*	*Triggered by player*	T
Transition	*n/a*	*Signifies the transition of encountered component*	-
Layered within	*n/a*	*Signifies components contained by other components. Square brackets are components layered within components e.g (mCS [t.pov] - …)*	( ), [ ]
New information/goal set	*Goal*	*Player is given new information, instruction or goal*	*

Table 4.9: Play pattern codes

Source: Cameron

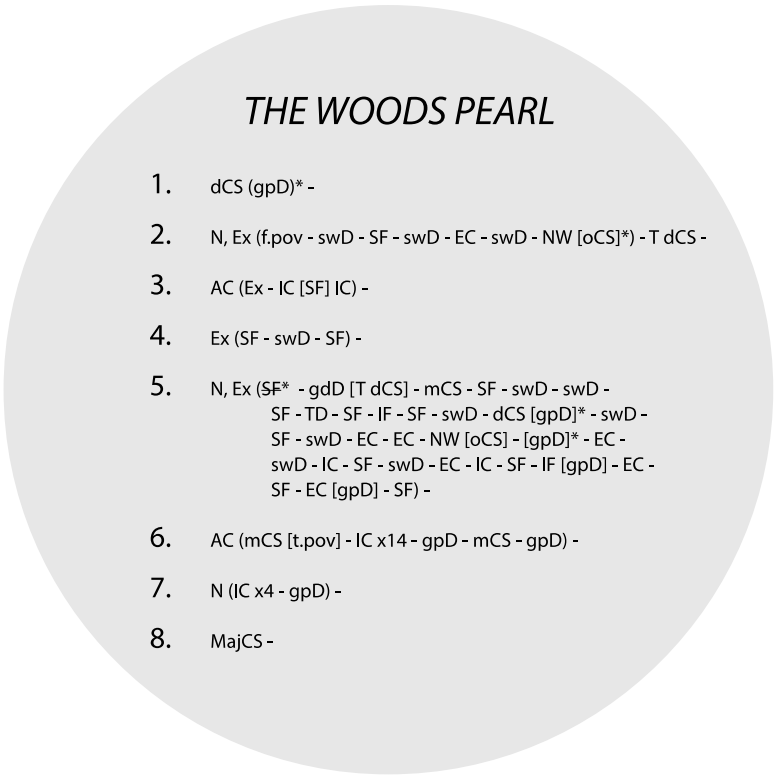

Fig. 4.9: Play patterns inside *The Woods* pearl

Source: Cameron

Figure 4.9 illustrates the components encountered in a single play-through of *The Woods*.

Because of the dynamic system, play patterns can vary despite having the same fixed

embedded content. Since the plot determines these fixed events, the story will not change from player to player which relates back to the players inability to alter the plot. However, due to the optional nature of interactive content and agency afforded to most challenging scenarios, the play pattern coded in Figure 4.9 documents the emergent narratives of one encounter in particular.

It is firstly important to note that it is possible to have many components overlap in play. In Figure 4.9, regular brackets signify this occurrence throughout the play pattern. However, it is also possible to have components that exist within the components that overlap the primary action. These are signified by square brackets within the regular brackets. In Figure 4.9, each line in *The Woods* pearl represents different areas in the environment that the characters travel through. For example, in the first line (1) the characters are positioned on the road that leads to *Bill's Town*. A *directive cutscene* (dcS) shown in line 1 is used as a narrative device to introduce the pearl by showing the player a long shot of the town. This cutscene contains *gameplay dialogue* (gpD), signified by regular brackets, which gives the player an focused instruction and is represented in the play pattern with an asterisk.

Lines 2 through to 7 in Figure 4.9 represent the separate environmental sections in *Bill's Town* that the player travels through. Lines 2 through to 7 represent the gameplay-oriented content within the pearl and therefore, the primary component in each line begins with a rule or set of rules to establish the player's role. While the player abides by the rule, they also engage with many other characteristics of the narrative and gameplay design. Line 4, for example shows how the player's main role is to *explore* (Ex) which leads to *finding supplies* (SF). While the player is completing these actions, the characters engage in *storyworld dialogue* (swD). Here, the player is immersed in the act of play by performing exploratory tasks. However, the player is also immersed in the storyworld due to the characters' conversation.

Line 4 is one of the more simple examples in *The Woods* play patterns. As line 5 indicates, introducing more variables and content for engagement allows for greater emergent possibilities. While the embedded content in the game remains fixed in the environment, it is the player's ability to make choices within the vast framework that creates their unique play patterns. The occurrence of embedded and emergent content builds immediacy between the

player and system because the player's journey unfolds alongside the character's journeys. Here, the player and system collaborate in many exchanges of player actions (input) and system responses (output). This active relationship allows the player's own emergent narratives that documents their unique experience to exist and unfold alongside the embedded system.

4.5 **Summary**

In *The Last of Us*, a fixed linear narrative forms the foundation of which the game is then built up on. Embedded narrative and gameplay components function together within the system to support each other. Furthermore, a multifaceted narrative architectural environment enables a "framework of emergent potential" so players can determine their own unique emergent patterns that document play. This environment also incorporates a large variety of dynamic content creating instances of "simultaneous play". This increases the amount of emergence that can arise. Although there is a fixed story that spans across the game, the player's choices allow them to contribute to the unfolding story and simulate the experience "of being there" (McMahan, 2003, p. 68).

The Last of Us seamlessly intertwines satisfying, choice-based gameplay with a stellar narrative. It never slows down, it never lets up, and frankly, it never disappoints.

— Moriarty | The Last of Us Review: Survival of the fittest

Chapter 5. Bridging the Story-Game Gap

In 'Games telling stories' Juul (2001) argues that videogames cannot tell stories in the way a film does (the events of which have already occurred) because gaming events are constructed in the present. Juul (2001) points out that videogames prior to the story-driven game incorporated narrative in a problematic way. This argument and other similar criticisms highlight the need for a shift in the way that narrative is designed in the interactive medium. The issue, as Crawford (2013) argues, is with the way the "story and the game are separate creatures sharing the same box; [where] the connections between the two are sparse" (p. 151). While games and stories are different phenomena, bridging the story-game gap in a videogame is now an entirely realistic task for developers. *The Last of Us* case study is an example of how narrative can be effectively designed with its gameplay counterparts. Rather than separating two modes of engagement in the one system, this chapter demonstrates that there are design techniques that can integrate the conflicting components where each strengthens as opposed to harms the immersive capabilities of the other. What follows is a discussion on the ways *The Last of Us* designs it's narrative and gameplay where narrative does not act as a secondary component of the gaming experience.

5.1 **The Players Role in Both Story and Game**

"The player's role" describes how the player of a game contributes to the construction of gaming events. A game system requires players to actively participate in a game so that events move forward, goals are achieved and the game is won or completed. While players actively construct events, the viewers of a film story passively watch those events unfold and have no way of

influencing how the story will end. In videogame design prior to the story-driven genre, the player had no role within the story. Instead, the player's role was to participate in constructing events and to watch pre-generated narrative content through cutscenes. However, the story-driven game stretches the gaming paradigm to give the player a role within the story. As the following sections explore, the narrative structure, architectural models, and devices in *The Last of Us* give the player roles in both the story and game.

5.1.1 **A fixed narrative**

In *The Last of Us*, the fixed *Hero's Journey* narrative structure discussed in section 4.2.1 provides the foundation of the system, which the game is then built on. The player cannot alter the major plot events that make this structure. Interestingly, this differs from the expectation that story-driven games should have an adaptable plot. Story-driven videogames such as *Until Dawn* (Supermassivegames, 2015)*, Telltale's Batman* (Telltale, 2016)*, Beyond: Two Souls* (Quantic Dream, 2013) and *Life is Strange* rely on dialogue choices and/or *significant* moments to change the trajectory of the plot. By choice or chance, the player can determine the outcome of the story from a set of pre-existing endings. However, *The Last of Us* has a fixed narrative so that the game designers are in control of plot, and can maintain some control over the meaning.

There are design patterns examined in the case study that allow developers to maintain some control over meanings in *The Last of Us*. The first is a design pattern from narrative devices described as "point-of-view" (see section 4.2.2.3). *The Last of Us* is a third-person adventure game where the player can physically see the character (Figure 4.4). In this sense, the divisions between player and character are clear; the player in the real world controls the character inside of a storyworld. The character's experiences occur in a fictional space where the real-world player is never meant to be the character unlike first-person videogames such as *Bioshock*. This perspective reinforces the idea of a fixed-narrative where, like the plot events, the player cannot alter the character's identity. Moriarty (2017) supports this idea in a conversational podcast called 'Kinda Funny Gamescast' suggesting that in story-driven games, the player exists to observe the character's story, not to actively project their identity onto them.

This understanding that the player is not the character is also reinforced towards the end of *The Last of Us* when the player is not given a momentous choice. It is a common design trait in the

story-driven game (seen in titles such as *Dishonored* and *Heavy Rain*) where the player is able to make a final, momentous choice at the end of the game. Even if these choices do not change the outcome of the story, having that choice usually enables the player to decide whether the character was truly “good” or “bad”, as one last hurrah to videogame agency. However, the interesting design pattern discussed in section 4.2.1 describes how the player is not given one final choice in *The Last of Us*. There are three points in *The Last of Us* where players could have a final choice. The first scenario is when the player is not given the choice to save Ellie. The only option Joel has here is to fight through Firefly soldiers and save Ellie before her surgery. Although this choice is not given to the player, Joel’s decision does fulfil the purpose of *The Hero’s Journey* narrative structure since saving Ellie redeems Joel from the inability to save his own daughter twenty years earlier. Furthermore, Joel’s will to survive is never questioned because he is the hero and protagonist. Having this final choice would have different endings that express very different ideas, perhaps not intended by the developers. Therefore, taking this choice away makes sense. The next two scenarios where the player could have a final choice relate to the narrative structure in a similar way to the first example. In the final chapter, *Jackson*, the player cannot choose whether to shoot Marlene, or to then choose whether lie to Ellie about it. These instances completely rid the player of any agency that allows them to determine who Joel is, which solidifies the kind of character he is. Taking away these final choices also strengthens the idea that *The Last of Us* is a collaborative gaming event whether both player and characters have a clear role in the game’s overall meaning.

The design patterns discussed here embrace the fixed narrative created by the developers. This supports Moriarty’s (2017) argument that the players’ of a story-driven game are merely observers (albeit active ones). Because of these design patterns, the player’s role resembles traditional game design models where the player is told a fixed story with a separated character. However, as this study has explored, a fixed narrative risks undermining the players agency in the game. Therefore, *The Last of Us* disguises this fixed story through its narrative architectural environment, as the following section will discuss.

5.1.2 **Disguising the fixed narrative**

Instead of incorporating an openly adaptable plot, the multifaceted narrative architectural environment in *The Last of Us* disguises the fixed linear narrative behind a dynamic open-world

illusion that encourages non-linear play. As section 4.2.3 points out, the predominant macro-narrative architectural model is the String of Pearls. This linear model spans across the wider game structure and shows that plot events are fixed, the progression of which are triggered as players make their way through the game. Although the player does not control the outcome of this story, there are certain design techniques that make it seem as though the player is influencing the trajectory of the plot events. Some story-driven videogames (discussed above) such as *Beyond: Two Souls*, *Until Dawn, Telltale's Batman,* and *Life is Strange* are designed to address the fixed narrative by incorporating a narrative where the players can choose the outcomes. These titles use what is described as the "Branching Narrative" (see in section 2.2, Figure 2.4). While this leads the player to "construct" their own version of narrative events, O'brien (2013) questions whether games designed in this way incorporate any actual gaming components at all. This suggests that videogames using the Branching Narrative model are more like interactive narratives than videogames, similar to pick-a-path storybooks in a digital setting[1].

Instead, *The Last of Us* constructs its narrative environment to disguise the linear structure of the plot. While the Branching Narrative in the examples above affect the plot, *The Last of Us* uses a "branching path" to construct a map filled with varying actual avenues for the player to travel. Although these pathways eventually lead to the same place, the player determines the journey along the way. Furthermore, this branching path ties in with the "Amusement Park" and "Building Blocks" architectural models. While the player can choose which paths to take, they can also decide when to stop travelling those paths and veer away from the central story missions. Of course, this is motivated by the exploring rule, which in turn is motivated by the addressing challenges rule (discussed in section 4.3.1). The important point here is that the player is given agency to move through the game space, as they prefer. Using a range of different narrative architectures within each pearl enables different types of interactive modes and agencies within the one game system. As a result, *The Last of Us* can tell a fixed story and disguise that linearity through an open world illusion in the smaller moments of play.

[1] Conceptualising a videogame as an interactive narrative depends on how and how much gameplay is incorporated into the system; decisions that change on a case by case basis. This is a subjective discussion point too large to address properly in this study since the nature of videogaming is still being debated.

Furthermore, the incorporation of dynamic challenges such as Infected or human enemies along with the impression of infinite danger, creates the sense that each encounter is unique. After entering the gated area before the main street in *Bill's Town*, there are two hidden Clickers. These two Clickers and their positions are fixed and will not change before interaction. However, encountering them is entirely up to the player. It is possible that the player does not discover them at all and continues through the town without knowing they are there. However, since the drive to find supplies is a part of motivating nonlinear play, it is more than likely they will be discovered if not by the player paying attention and hearing them "click", then by chance while the player is exploring. Assuming the Clickers are discovered, the player makes strategic, combat, and weaponry choices that lead to unique play patterns. Additionally, these approaches are influenced by the supplies gathered at previous points in the game, which instils the notion that a player's actions and decisions have consequences for later moments of play. What's more, the player is consistently unaware whether these are the only Infected in the area since they pop up in unsuspecting places. This design technique creates the impression of infinite danger, leading the player to believe the world is constantly adjusting to their movements in the space. As a result, reaching the embedded entry and exit points within each pearl seems entirely natural according to the games events. This disguises the fixed linear story with the rules of the system that encourage nonlinearity and the games environmental content. However, these design are presented in a way that fulfils the storyworld, as the following section will discuss.

By disguising the fixed narrative behind a multifaceted environment that contains a range of dynamic challenges, the player's role in the game begins to takes shape. The players nonlinear choices through gameplay helps to construct the narrative events that then contribute to *The Hero's Journey*. This shows how narrative and gameplay become intertwined where the player's actions directly affect their simulated journey.

5.1.3 **Constructing (emergent) story**

Although *The Last of Us* developers maintain control over the events and outcome of the plot, players can construct their story in the smaller moments of play. The ability to construct one's emergent story is firstly enabled the multi-faceted environment discussed in the section above. While the use of multiple architectures disguises the fixed narrative, challenges are in place to

create a dynamic and consequential system leading to unique gaming events in the smaller moments of play. These gaming events influence how the player can construct their emergent story. Although the player is not the character, they are able to simulate “the feeling of being there” as McMahan (2003, p. 68) writes. Through a variety of designed characteristics, the player mediates meaning through the character’s position.

The ability to construct one’s own story requires a degree of agency in the space. While the point-of-view discussed earlier gives the player a third-person perspective of the character, they are able to gain agency in the space with a first-person perspective of the storyworld. Although *The Last of Us* is undoubtedly a third-person game, the ability to move the camera around in a way that benefits their view of the storyworld contributes to the players “fly on the wall” access to the space. The character is positioned slightly to the left of frame, which gives the player a larger view of the storyworld on the right. This angle gives players a first-person view in an otherwise third-person game suggesting that they do contribute to the space and its meaning in some way. The player can both observe the character’s story – as Moriarty (2017) puts it – but also see that imagined world through the character’s gaze and simulate their experience. Additionally, through this first-person perspective, players are able to construct meanings with different camera angles, look at what they wish, and view the storyworld in a way that benefits their gaming experience. This type of agency not only aids the fast-paced action sequences, but also allows the player to become, as Bolter and Grusin (1999) say, “both actor and director” (p. 47). Players also have agency in the smaller moments of play because there are certain aspects in the environment (including challenges, found items, additional dialogue and specific pathways or rooms) that the player does not necessarily have to interact with. By choice or chance, the player has the opportunity to unlock additional content that supplements the wider storyworld. For example, engaging in additional dialogue (see section 4.2.2.1), gives players extra information about the characters they talk with. While this may be exciting to some players, it is not for others. It is this split-second ability to choose what to engage with and when at the time of play that allows players to construct their emergent story to supplement the major plot events.

The design challenge of a fixed narrative is to develop a game where the player’s presence is needed, not just to reach new sections of the story but to also be a part of and participate in that

story. In the podcast discussed in section 5.1.1 on fixed narrative, Miller and Getty (2017) contrast Moriarty's (2017) view on the player's presence in story-driven game spaces. While Miller (2017) comments that relating to characters is different for each person, Getty (2017) suggests that the connection between player and character can be about relating to the character's situation, relating to the decisions they have to make, or relating to the obstacles they have to address. In this argument, relating to the story of a game can be less about direct intervention of that narrative and more about an abstract connection between the two parties. In *The Last of Us* rather than determining the plot events, the player can abstractly connect to the story by simulating the character's position in a number of ways.

Firstly, each Act in the game has a story and gameplay function. While Act I introduces the player to the storyworld and gives background information about the protagonist, it also introduces the game world and gaming mechanics so that the player can gradually learn the general control scheme. While these two functions can exist separately, the developers take this opportunity to create an environment where the player can participate in the unfolding story events too. As the example of Sarah waking up in the middle of the night (see section 4.2.1) suggests, the mechanical restrictions to ease the player into the game world are also true for the character's situation, therefore, the player can gain a sense of what Sarah might be experiencing by simulating that experience through the gameplay. Additionally, the player is put in the character's position because they can engage in more than one activity at a given time. Simultaneous play is firstly enabled by the multifaceted narrative architectural environment and takes shape because of the variety of rules and content that can be engaged with. Here, the player is given freedom to move through and engage in the game, as they want. This freedom reflects the character's storyworld situation in a post-apocalyptic environment. As Getty (2017) suggests, the narrative spaces enable the player to relate to the character since both parties are able to behave in a similar way (even though one of those behaviours is simulated). Furthermore, although designed skills such as "listening mode" (Figure 4.6) referred to in section 4.3.3 is a fictional ability inside of the games environment, this mode is useful for players because it simulates hearing entities movie around. Rather than trying to create a realistic representation, the developers have created a functional skill that the player would have if that situation was in the real world. In these examples, although the player does not

construct the plot events, they interact with the embedded narrative components through gameplay and participate in a collaborative mediated event.

The narrative structure in *The Last of Us* is a vital component in the system and drives the player to continue through the game and affects the players overall gaming experience. Here, narrative as the foundation of the system is not subordinate to gameplay. A player's fundamental role in a game (not necessarily in a digital setting) is to abide by the rules to achieve goals by using mechanical actions. Interacting with the games content produces unpredictable events that make each game interesting. In the story-driven game, this role is more complicated because narratives, especially fixed ones threaten the very definition of a game in the first place. What would be the point in playing a game if you knew it was fixed from the very beginning? As the videogame industry evolves, so too must the conceptualisation of the videogame medium. While this conflict between past and present events is complex, the idea of constructing a digitally simulated adventure, where participants are both actors and directors of that experience can be realised. Story-driven videogame players are like actors in a live improvisational play or "cyberdrama", a term coined by Murray (1997). They adapt to unpredictable events where some of those events can be pre-determined by an outside moderator, such as a developer, and they experience those events at the same time. In *The Last of Us*, the player can watch a narrative unfold as pre-generated content decided by the developers. However, the player is also able to participate in that narrative and engage with it through gameplay in a way that fulfils the purpose of that same story. The smaller moments of the game make each play-through unique. Since the narrative structure is oriented around a journey, it is these smaller events that cause the hero to transform. Therefore, even if the outcome remains the same, the player takes part in causing the story to unfold. While this mediated experience could not take place without the pre-existing system, the story cannot take place without the player's interventions. Thus, *The Last of Us* is a collaborative mediated exchange between an existing system and an unpredictable player.

5.2 **Achieving Immersion via the Act of Play and Storyworld**

Immersion, as Taylor (2002) suggests, occurs in two ways; as "diegetic", engrossment in the act of play and "intra-diegetic", engrossment in a spatially constructed narrative. Taylor (2002) suggests, that diegetic and intra-diegetic immersion exist "on something like an xy axis with

some games offering differing blends and others favouring diegetic forms more exclusively" (p. 13). In *The Last of Us*, these two forms of immersion are used consistently but not always at the same time, depending on the player, the player's choices and the specific moment in the game. However, both branches of immersion can be achieved because of the narrative and gameplay design. Interestingly, while characteristics of the narrative design contribute to achieving immersion in the act of play, characteristics of the gameplay design contribute to achieving immersion in the storyworld. The two types of immersion, whether it be about the game or the story, are interrelated where each component of the system works to support the other on top of their functions. The following sections explore how immersion in the act of play and immersion in the storyworld are designed to occur throughout *The Last of Us*.

5.2.1 **Immersion in the act of play**

Immersion in the act of play refers to the state of engrossment when players are heavily involved in the gaming paradigm, not only by completing the game but also through the experience of playing the game. Diegetic immersion is designed to occur using narrative devices, such as cutscenes and gameplay dialogue, which consistently reinforces important gaming objectives (spanning from macro to moment-to-moment goals) throughout play.

Although major and minor cutscenes are story-oriented, they also reinforce gaming objectives by introducing and concluding the larger macro-goals that span across chapters of the game. However, it is smaller, functional cutscenes and gameplay dialogue (discussed in section 4.2.2) that are scattered throughout each pearl to achieve immersion in the act of play by clearly defining the player's role, thus increasing the rate that tasks can be completed in the smaller moments of the game. Interestingly, reinforcing these moment-to-moment gaming objectives only *allude* to what the player must do because they are not immediately bound to the instruction[2], but free to continue exploring the environment before moving on.

Consistently reinforcing gaming objectives also affects immersion in the act of play because gaming events can unfold at a smooth pace. This is beneficial in a story-driven game since those gaming events gradually build up contributing to the story and overall experience. For

[2] This is unless the specific game settings have pop-up tutorials, which overlay the storyworld, asking the player to quickly perform the tasks as a way of learning how to play the game. If these settings are selected, the tutorial will only pop up if it is the first encounter with the mechanic, usually in the first few chapters of the game.

gaming events to unfold at a smooth pace, narrative devices not only reiterate the player's role but also let the player know what can and cannot be interacted with in the games environment. A large part of story-driven gameplay is about exploring an environment to uncover stories hidden beneath the surface of the world. Incorporating this type of gameplay opens up the player's imagination to push the interactive boundaries in the game world. Narrative devices are used in *The Last of Us* to prepare the player's expectations so that gaming events contributing to the story, can unfold fluidly. In the *Bill's Town* example on gameplay dialogue (see section 4.2.2.1), Joel attempts to open a locked fence. Ellie suggests that the two climb the fence but Joel replies *"there's wire on top, we gotta find another way around"*. Here, through gameplay dialogue Joel indirectly informs the player that they cannot interact with the fence, rather than the player investigating whether the fence is climbable. Instead, the player can quickly move on to their next task. Using dialogue to reinforce the actions performed to achieve goals solves the frustration of discovering what can be interacted with in a gaming environment, therefore achieving immersion in the act of play. Functional cutscenes also allow the game to unfold smoothly. While short clips instruct the player, they also fluidly transition moments of play. For example, the observational cutscene that shows Joel hoisting Ellie over a fence is small and barely noticeable when initially played through. The fact that this clip is a cutscenes is not highlighted at all. The characters simply perform the action enabled by the player and the game moves forward.

It was established in section 5.1 above, that linear play throughout the game is disrupted because the player is given a large variety of content, and agency to interact with that content. While reinforcing the objectives ensures that players are aware of what they need to do, allowing the player to maintain agency over their desired actions in the game space ensures that they are in control of their emergent journeys. As the game allows players to veer of the linear pathways, time spent away from these central objectives has the potential to create distance between the player and system, which is why narratives were introduced into videogames (Salen & Zimmerman, 2004; Crawford, 2005). However, by using narrative devices that support the gameplay, the player's game role is framed in a fictive space where immersion in the act of play extends to immersion in the storyworld. Furthermore, gaming instructions are often disguised as conversations between characters, whether in a cutscene or through actual dialogue, so that the player is never directly addressed but remains immersed in the act of play

occurring inside the storyworld. Here, the player's presence is not only a part of the game system, but becomes a part of the narrative too.

5.2.2 **Immersion in the storyworld**

Achieving diegetic immersion by reinforcing the player's game role through various narrative devices so that gaming events can unfold at a smooth pace results in a gaming experience that benefits both the story and the game. Although immersion in the act of play is an ideal way for players to engage with a videogame, this state is not always possible, especially when cutscenes are used. Furthermore, keeping the player immersed in the story of a game is challenging because of the direct contrast with gameplay as an interactive mode of engagement. However, there are design characteristics that contribute to immersion in the storyworld. Although most are a result of the narrative design where cutscenes and story-oriented dialogue create a believable storyworld, there are also characteristics of the gameplay that contribute to immersion in the narrative.

The Last of Us encourages immersion in the storyworld because the player's actions are contextualised in a way that contributes to the unfolding plot. When players interact with the game, they are doing so through the guise of the imagined space and, therefore, they become a part of that unfolding story. Simple game rules (see section 4.3.1) such as navigating, exploring, and addressing challenges transform into tasks that contribute to the story as the narrative function for each rule indicates. Navigating contributes to the story because it makes up the character's journey. Exploring contributes to the story because certain items are necessary to survive (in the story and game world). Addressing challenges contributes to the story by representing the series of hardships that the hero faces in order to transform. In this case, the player facing a series of videogame challenges simulates *The Hero's Journey* by finding where to go, obtaining supplies to survive and overcoming obstacles.

Goals are also contextualised through the storyworld in a more direct way. Rather than navigating from point A to point B, players travel through various landscapes to achieve goals. In *Bill's Town* for example, although players are required to reach specific points in the environment, this is contextualised by the macro-goal to *find a car* (Table. 4.8). Therefore, working towards achieving that goal contributes to the story as well as enabling the player to

advance through the game. Framing game goals with the storyworld makes the construction of narrative a crucial aspect for progress. Therefore, immersion in the narrative spaces in *The Last of Us* becomes an important aspect of progression since the player's actions, when engaging with the gaming components are contextualised through *The Hero's Journey* narrative structure.

Immersion in the storyworld is also established through a variety of narrative devices such as cutscenes and storyworld dialogue. Major and minor cutscenes are the larger, story-oriented cutscenes that drive the major plot events forward. Although the section on immersion in the act of play suggests that these scenes do introduce and conclude macro-goals, their main purpose is to show short films in between chapters. These story-oriented cutscenes are also used as breaks/rewards for the player after stressful action sequences. Although the player is not immersed in the act of play when a major or minor cutscene is triggered, they remain immersed in the storyworld because the player's actions are contextualised through that storyworld. Breaks from gameplay are used to rest from the fast-paced action sequences while being rewarded with a section of the plot so that the player remains immersed in the game in one way or another.

As discussed previously in this thesis, the use of cutscenes are criticised in game studies and culture for interrupting an interactive medium with a passive form of engagement (Cheng, 2007; Poole, 2004). Ryan (2005) also criticises the typical cutscene format explaining, "if the story only moves forward during the cut scenes, the strategic significance of the player's actions is reduced to passing certain roadblocks" (para. 23). Ryan (2005) goes on to suggest that using storytelling strategies incorporated throughout gameplay is a more effective method of integrating narrative in the interactive medium. *The Last of Us* solves these immersive issues with cutscenes by breaking the scenes down into focused sequences with specific purposes, depending on where they are placed throughout the game. However, the game also incorporates storytelling elements with storyworld dialogue that occurs while the player is performing gameplay tasks. The example used in section 4.2.2.1 explains that in *Bill's Town*, Ellie says *"Look Fireflies!"* which is expanded to *"…Real ones I mean"* if the player chooses to turn back to look at her. This line of dialogue tells a story about Ellie without interrupting the act of play since it is entirely up to the player whether to engage with what she is saying. Furthermore, the ability to engage in additional dialogue or find items left from other survivors

throughout the course of play are design techniques that contribute to storytelling, therefore, maintaining immersion in the act of play as well as in the storyworld.

In *The Last of Us*, the two forms of immersion are most often experienced together because the narrative and gameplay components support each other. When one form of immersion is not used (e.g in a major or minor cutscenes), the other form remains. This occurrence conflicts with Taylor's (2002) suggestion that "In order for intra-diegetic immersion to occur, the player must first be diegetically immersed in the game" (p. 14). Whether immersion in the act of play or the storyworld is present in the overall gaming experience, some form of immersion is maintained at a given time ensuring that the player is forced to be an important asset in the construction of both story and game.

A large variety of narrative and gameplay components in *The Last of Us* create a complex videogame system. While each narrative and gameplay component has a specific purpose within that system, they also function in ways that benefit the other components. While the narrative structure organises the plot into Acts, these Acts also use gameplay to involve the player in the character's story. Narrative devices communicate information both about the storyworld and game, and the narrative architecture structures that storyworld to encourage a range of different interactions. Additionally, the gameplay components rules, goals and mechanics incorporate narrative functions by contextualising the player's actions within the storyworld. Here, *The Last of Us* ensures that each component, whether narrative or gameplay, is used to contribute both to the game and story together.

Furthermore, the design characteristics of each component achieve multiple levels of engagement. While having a gameplay and narrative function in each Act allows players to simulate the character's position inside the storyworld, this also builds a relationship between the player and system that then leads to simultaneous immersion in the act of play and storyworld. Each narrative and gameplay component in the system, and how these components are structured and unfold as the game is played contributes to bridging the story-game gap.

5.3 **Integrated Narrative and Gameplay Structure**

The coding system presented in section 4.4 documents the way that narrative and gameplay components are integrated within each pearl in *The Last of Us*. Typical videogames that use the "String of Pearls" model across the macro-game structure use a *"task–action–task–action"* format where gaming events are performed singularly before moving onto the next singular event. This occurs in the first *Uncharted: Drake's Fortune* (Naughty Dog, 2007) videogame. Protagonist, Nathan Drake, is given one task and when the player achieves that task, they either perform another task or are rewarded with a cutscene. This format is problematic because it does little to involve the player in the story.

The Last of Us differs significantly from the typical "String of Pearls" format because of the way each pearl is structured. Enabled by the multifaceted narrative architectural environment, each pearl in the game represents the smaller moments of play, integrating gameplay and narrative components by layering and overlapping them as play patterns unfold. As Fig 4.9 in section 4.4 illustrates, the player performs a rule as a primary action, where other components and content like cutscenes, dialogue and challenges overlap with the rule that is already being performed. The section in the game before Joel and Ellie reach the main street in *Bill's Town* is used as a transitional environment, where the overall goal is to reach the main street. However, many different components that are encountered here. The player's choices trigger emergence when defeating (or avoiding) hidden Clickers guarding supplies. The player can also search through the house to find a range of different supplies as Ellie and Joel talk to each other with storyworld dialogue. Lastly, there is a locked door that can only be opened if the player has a shiv, or the necessary items to craft that shiv. These additional aspects of the game are all encountered while the player is in the act of navigating. The player engages in the game in multiple ways at the same time to create an immersive and multifaceted gaming experience. As Ryan (2005) suggests, narrative modes of engagement occur as storytelling strategies inside of the gaming sequences in conjunction with gameplay modes of engagement to offer players a medium that encourages simultaneous engagement in the story and game.

The integrated narrative and gameplay structure within the pearls, combined with a variety of components in the embedded system enables a "framework of emergent potential". The

embedded system in *The Last of Us* contains the structure, narrative devices, architecture, rules, goals and mechanics to encourage different forms of engagement and immersion. However, despite the game having a fixed narrative, the variety of content available for engagement also enables a large degree of emergence determined by the player. The term, "framework of emergent potential" is used throughout chapter four to describe how the embedded system, or framework, creates a game space full of emergent potential. Players are given a range of tools (rules and mechanics) to use in different scenarios as required, which leads to dynamic gaming events. For example, in the *Graveyard* pearl, the player approaches a scene with a range of different Infected located in different directions, blocking each path available. The task here is to navigate through the Infected to reach an exit point in the environment. Since the player is not aware of the exact destination of that exit point, navigating through the Infected becomes like a puzzle. Depending on the events that unfold, players can attempt to stealthily overcome certain Infected, avoid or attack them offensively. Since these Infected have different physical characteristics (sight, fungal armour) they must be overcome in certain ways. The range of situational variables here and the player's actions create the unique emergent play patterns that document each individual's journey. While one player may avoid Infected, another may not, needing to adjust their strategy in the moment. The point is that the player can determine their version of the gaming events because of the freedom to access and use different mechanical items in a way that benefits their specific movements in the game. While the framework provides the environment with each Infected placed accordingly; the player can choose how to approach the game using a range of different gameplay tools. Furthermore, since these gaming events contribute to the journey that transforms the hero, the player is afforded a role contributing to the unfolding story, regardless of whether or not that story has fixed outcomes. Miller (2016) on a 'PS I love you XOXO' podcast describes the story-driven game as a colouring book, where everyone has the same picture or story and it is up to the individual to colour it in as they wish. *The Last of Us* embraces this idea. While the major plot events and outcome of the story exists prior to the player's interactions with the game, the player can still contribute to the unfolding story in their own way by constructing emergent play patterns, according to a wide range of variables set by the developers.

Integrating narrative and gameplay throughout the system enables players to be involved in the story and the game simultaneously, which establishes the multifaceted story-driven gaming experience. Furthermore, enabling a system that incorporates the *framework of emergent potential* allows players to contribute to the narrative, even if that narrative has a fixed ending. By integrating the gaming and narrative components thoroughly through the system, narrative becomes an equal part of the gaming system in multiple ways.

5.4 **Narrative as an Equal Component of Game Design in *The Last of Us***

In *The Last of Us*, there are varieties of design patterns used throughout the system that bridge the story-game gap. Collectively, these patterns contribute to the intertwining of narrative and gameplay.

Firstly, narrative is not only incorporated in filmic cutscenes but also integrated with gameplay where each component supports the other. In *The Last of Us,* formal narrative components incorporate functions that also contribute to gameplay. Likewise, formal gaming components contribute to the overall story. For example, breaking the cutscene into focused sequences serves the overall narrative and gameplay in different ways. While the major and minor cutscenes represent the fixed plot events that contribute to the narrative, these scenes also support gameplay by introducing and concluding the larger macro goals in the game. Furthermore, the shorter functional cutscenes are used throughout the play sequences to communicate important gameplay information to the player as well as fluidly transition gaming events. Although the cutscene is primarily thought of as a narrative component, it also exists in *The Last of Us* to support the gameplay components as well as game playing activity. Here, the narrative and gameplay components function in multiple ways to improve the immersive capabilities of the system.

The Last of Us also constructs a space where narrative is not subordinate to gameplay but instead exists equally within the system by giving the player a role in both the story and game. In *The Hero's Journey* narrative structure, the events of that specific journey are key determining how the hero transforms. The player's actions in the game therefore construct the unique events that cause the hero's transformation. Although the plot in *The Last of Us* is fixed, players construct their own unique adventures in ways that significantly contribute to the

narrative. As a result, the player's role functions on multiple levels. The player watches pre-existing plot events and determines their gaming events as traditional game models do. However, because the components function to strengthen each other engaging in the game also contributes to the player constructing their own story. Furthermore, the multifaceted architectural environment and large variety of content builds a framework of emergent potential, to exploit the dynamic capacity of embedded components. Narrative is an equal component of the game system because the very purpose of that game is to contribute to the unfolding story. However, *The Last of Us* avoids terms such as "interactive narrative" or "pick-a-path digital stories" by incorporating the player's actions into the construction of that story. Although they do not affect the outcome, they certainly participate in a journey where the embedded and emergent content closely relate to one another.

There are also a range of design patterns that contribute to achieving immersion in the act of play and storyworld. As Taylor (2002) suggests, these forms of immersion exist on an axis where videogame design can incorporate different immersion blends. In *The Last of Us*, these forms of immersion are important aspects of the system. Because the narrative and gameplay components functioning to support each other, it doesn't always matter what form of immersion occurs at a given time. The goal is to maintain interest in the story through the gameplay. Here, immersion in the storyworld is not treated as a secondary component in the system but is instead used to strengthen the player's relationship with the game as a whole.

The way that narrative and gameplay components are structured also contributes to the narrative not acting as a subordinate aspect of the system. In *The Last of Us*, narrative and gameplay components supplement each other with multiple functions. While narrative devices reinforce important gaming objectives to clearly define the player's role, which maintains immersion in the act of play, gameplay components are framed within the storyworld to keep the player immersed in the story. This supportive relationship between gameplay and narrative suggests that both are equally important aspects in *The Last of Us*. An interesting discovery in this study is the way that structural narrative and gameplay components are layered throughout play. By breaking down the cutscene and using in-game storytelling methods (Ryan, 2005) such as dialogue, narrative overlaps with gameplay components. Because of this, the player can engage in both story and game interchangeably and in most cases, simultaneously. These

overlapping components that fluctuate between narrative and gameplay modes of engagement offer the player different forms of interaction to keep play interesting.

The relationship between narrative and gameplay components as well as the way they are structured in *The Last of Us* shows how narrative does not need to be a secondary component of the videogame system. Instead, narrative can work alongside gameplay to support gaming experiences and increase the immersive capabilities of the medium. In *The Last of Us*, players participate in a fixed story while simulating the experiences in a post-apocalyptic world. Narrative is given equal space because experiencing the story is the goal, which is achieved by interacting with the game. In this story-driven adventure, narrative works with gameplay to create a "seamless" story-oriented gaming experience (Moriarty, 2013). This study shows that the story-driven game and videogames in general, do have the capacity to be a collaborative event between the player and system that can maintain the player's importance in a game with a fixed story. Narrative design in the videogame does not need to be a "tacked-on feature" (Crawford, 2005, p. 69) or "subordinated to gameplay" (Ryan, 2007, p. 14); narrative can strengthen the gaming paradigm as a whole.

5.5 **Summary**

In *The Last of Us*, the player is given a role in both the story and game because each embedded component functions to also support the other. Although the game contains a fixed story where the outcome cannot be changed, players are able to contribute to the unfolding narrative through play because they simulate the character's position inside of the storyworld and create an emergent journey of their own. Since the embedded narrative and gameplay support each other, the player is able to achieve immersion in the act of play and storyworld. These two forms of immersion occur simultaneously and interchangeably, which is dependant on the specific moments in the game. Within the smaller moments of play; narrative and gameplay components are layered and overlap when the player interacts. As a result, the player can engage in aspects of the story while simultaneously interacting with the game space and completing game goals. In *The Last of Us*, narrative is not treated as a secondary feature but is designed to be the foundation of the system that drives play.

Chapter 6. Conclusion

Before the story-driven design trend, game development typically separated narrative and gameplay components because they provide different modes of engagement for players. Although narrative was used to motivate play, stories were usually incorporated into the interactive medium mostly as passive filmic cutscenes that hindered immersion. Here, narrative was designed as a secondary, tacked-on component of the gaming system. In contrast, gameplay was considered more valuable as a key driver of engagement because players were able to directly interact with the digital spaces. This conflict between passive and active modes of engagement caused immersive issues both in the act of play and storyworld, which then affected the player's overall gaming experience. However, this study has addressed that the issue with narrative in the interactive sphere is not with the cutscene solely but rather with how narrative as a whole can fail to be designed and integrated properly with gameplay. Therefore, this study has asked how narrative and gameplay in the story-driven videogame can be designed so that narrative is not subordinate to gameplay.

In order to investigate this research question, this study has explored an exemplary case of narrative and gameplay design: *The Last of Us.* A mixed-methodology containing formal analysis and close reading methods were used to investigate the narrative and gameplay design to understand how story-driven videogames function as embedded systems. Additionally, this study has identified the player as a crucial aspect of the gaming paradigm and uses a concept called "the players lens" to understand how videogames can function as emergent activities too. By investigating the variety of narrative components (e.g structure, devices, architecture), gameplay components (e.g rules, goals, mechanics) and their emergent implications, this study demonstrates how narrative is treated as an equal aspect of the gaming system in *The Last of Us*. Rather than designing narrative and gameplay separately, the two are integrated throughout the system in multiple ways and overlap when the player interacts with the game. This results in a collaborative gaming experience where interacting with the embedded system enables the player to both watch and take part in an unfolding story through the gameplay, thus bridging the story-game gap and creating a videogame where the story is as important to the player as the gameplay.

There are multiple design methods that *The Last of Us* uses that show how narrative is not subordinate to gameplay but is designed as an equally important aspect of the gaming paradigm. Firstly, each narrative and gameplay component also functions to support and strengthen the other. Rather than separating the two components entirely so that there are distinct story and game modes of engagement, *The Last of Us* blends the narrative and gameplay together. This use of multiple component functions creates a videogame space where players can be immersed both in the act of play and storyworld simultaneously, which contributes to bridging the story-game gap.

Furthermore, due to how these multiple components function the player has a direct role both in the story and game. Although *The Last of Us* contains a fixed narrative where the player is unable to alter the larger plot events, players are still able to contribute to that unfolding story through their moment-to-moment gameplay actions because of the narrative architerctural design. The large variety of architectural models and embedded content enables a dynamic "framework of emergent potential" in the game's environment. As the player makes decisions in this framework, the system responds according to the players specific actions. Therefore, this adaptable system enables players to construct their own unique emergent narratives that document a particular player's journey. *The Last of Us* follows *The Hero's Journey* narrative structure where facing hardship throughout the protagonists journey is what causes them to change in some way. The player constructing unique emergent narratives in the smaller moments of play is what affords them the ability to contribute to the hero's transformation and therefore, contribute to the story despite it having a fixed outcome. This demontrates how the narrative in *The Last of Us* is what drives play to continue. Participating in the story through the gameplay allows for an immersive story-driven gaming experience.

The Last of Us not only intertwines the narrative and gameplay functions, but structurally layers and overlaps specific components creating instances of "simultaneous play". The use of in-game storytelling devices means that the player is able to engage in both the story and game at the same time, which contributes to immediacy and builds a strong relationship between the player and system.

It is necessary to study the story-driven game as a now prominent aspect of the game industry to understand the future of videogame development. While strongly ludic games still exist and thrive (e.g *Rocket League*, 2015; *Call of Duty*, 2007 onwards; *World of Warcraft*, 2004 onwards), storytelling is now seen as a legitimate and powerful component of game design. Currently, there are a number of recently released or announced for future release story-driven videogame titles (e.g *Detroit: Become Human*, n.d; *Death Stranding*, n.d; *Uncharted: Lost Legacy*, n.d; *Life is Strange: Before the Storm*, n.d; *The Last of Us: Part II*, n.d). This shows that the story-driven trend is an expanding game type. There is however, a risk with incorporating narrative into the videogame liberally. Titles like *Beyond: Two Souls* and *Telltale's The Walking Dead Series* (Telltale, 2013 onwards) use the interactive qualities of the medium so that players can create their own version of a story by affecting the larger plot events. These games show how narrative can be used at the forefront of game design, where gameplay is utilised as a secondary feature. Although these videogames are popular examples of the story-driven game, using gameplay as a secondary component in the medium has similar ramifications to using narrative as a subordinate feature. As O'Brien (2013) suggests, *Beyond: Two Souls* misses "the actual game built around [... the] story" (para. 9) since the gameplay is centred on making dialogue choices. Using narrative at the forefront of design results in a digital game that resembles "pick-a-path" books or television shows rather than complex interactive gaming environments. These examples show that while too little narrative focus can expose the narrative as a tacked on gimmick, too little gameplay focus can take away what it means to be a game in the first place. The suggestion here is not that gameplay and narrative should always be designed equally but that gameplay and narrative certainly have the capacity to strengthen a gaming experience when designed well.

Within the context of a newly developing field, this research has reflected on previous game research to identify a gap in game studies knowledge. This study has addressed a gap that seeks to understand narrative and gameplay together. With new and interesting game design methods being developed in new game titles perhaps researching the relationship between narrative and gameplay can be further explored and by doing so add further knowledge to the game studies field. Prior to the story-driven game, the role of narrative in the videogame was widely debated in academia, reflecting on the current state of the development industry. This study addresses the shift in game design that sees developers pushing the boundaries of what

narrative is capable of in the interactive sphere. As the videogame industry advances at a rapid pace, so too must our understanding of these design methods. In 2004, Zimmerman asked "What if dynamic play procedures were used as the very building blocks of storytelling?" (p. 163). This is precisely what *The Last of Us* and other titles alike are beginning to do. As this case study shows, it is even possible to create instances of dynamic play while maintaining control over the plot. The challenge then for game developers is to better incorporate storytelling design methods in a way that enhances the interactive qualities of the medium.

This study has identified the conceptualisation of narrative in the videogame as an issue of game design, rather than an issue of passivity. Although prior understandings of narrative in the videogame have been controversial, game studies is moving beyond debating the best way to approach the study of videogames to coincide with industry development trends. Early narratological and ludological arguments reflect the tendency in game development for narrative and gameplay to conflict within the system, effectively fighting for the audience's attention. However, this study has discovered that both narrative and gameplay can indeed be designed where narrative is not a subordinate feature in the system. Instead, narrative can be used as a tool to strengthen gameplay and re-define what storytelling in the gaming experience means. This research supports Ryan's prediction (2007; see chapter one), where videogames "will be played for the sake of experiencing […] narrative design" (p. 14) demonstrating how *The Last of Us* is an example of how narrative and gameplay are integrated throughout the game's design to bridge the story-game gap. This results in an immersive story-oriented gaming experience where the story and game blend together to become, as Moriarty (2013) puts it "intertwined", as the player engages and interacts with the system.

References

Aarseth, E (1997). *Cybertext: Perspectives on Ergodic Literature*. United States of America: John Hopkins University Press.

Aarseth, E. (2004). Genre Trouble: Narrativism and the Art of Simulation. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game.* (pp. 45-55). United States of America: The MIT Press.

Arsenault, A. (2009). Appendix – Narratology. In B. Perron, & M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 331-388). New York: Routledge.

Atkins, B., & Krzywinska, T. (2007). Introduction: videogame, player, text. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 1-7). United Kingdom: Manchester University Press.

Bizzocchi, J. (2007) Games and Narrative: An Analytical Framework. *Journal of the Canadian Games Studies Association*, *1*(1), 1-10. Retrieved from http://journals.sfu.ca/loading/index.php/loading/index

Bizzocchi, J., & Tanenbaum, J. (2012). Mass effect 2: A case study in the design of game narrative. *Bulletin of Science, Technology & Society*, *32*(5), 393-404. doi: 10.1177/0270467612463796

Bolter, J. D., & Grusin, R. (1999). *Remediation Understanding New Media*. United States of America: The MIT Press.

British Academy of Film and Television Arts (2014). Bafta.org. Retrieved from http://awards.bafta.org/keyword-search?keywords=The+Last+of+Us

Cheng, P. (2007). Waiting for something to happen: Narratives, interactivity and agency and the video game cut-scene. In *Situated Play, Proceedings of DiGRA 2007 Conference, 4*, 15-24. Retrieved from http://www.digra.org/digital-library/forums/4-situated-play/

Consalvo, M. (2009). Lag, Language, and Lingo: Theorizing Noise in Online Game Spaces. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 295-312). New York: Routledge.

Coleridge, S. T. (1984). *Biographia literaria, or, Biographical sketches of my literary life and opinions* (Vol. 75). New York: Princeton University Press.

Crawford, C. (2005). *Chris Crawford on Interactive Storytelling*. United States of America: New Riders.

Crawford, C. (2013). *Chris Crawford on Interactive Storytelling* (2nd ed.). United States of America: New Riders.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed.). United States of America: Sage Publications.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.

Elson, M., Breuer, J., Ivory, J. D., & Quandt, T. (2014). More than stories with buttons: Narrative, mechanics, and context as determinants of player experience in digital games. *Journal of Communication*, *64*(3), 521-542. doi: 10.1111/jcom.12096

Entertainment Software Association. (2015). *2015 Sales, Demographics, and Usage Data: Essential Facts about the Computer and Video Game Industry.* [PDF] Retrieved from http://www.theesa.com/about-esa/esa-annual-report/

Fernández-Vara, C. (2015). *Introduction to Game Analysis*. United States of America: Routledge.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry*, *12*(2), 219-245. doi: 10.1177/1077800405284363

Frasca, G. (2004). Videogames of the Oppressed: Critical Thinking, Education, Tolerance, and Other Trivial Issues. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 85-94). United States of America: The MIT Press.

Genvo, S. (2009). Understanding Digital Playability. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 133-149). New York: Routledge.

Getty, T., Miller, G., & Moriarty, C. (2017, February 28). *Gender Diversity in Games – Kind Funny Gamescast Ep. 109 (Pt.2)* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=8Z0TpusDvxs&feature=youtu.be

Hatfield, D., Davis, J., Petty, J., & Claiborn, S. (2016, September 29) *Why Videogame Movies Don't Word – Gamescoop! 407* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=G50JuEHcIEY

Haywald, J. (2014). The Last of Us wins GDC game of the year award. *Gamespot* Retrieved from http://www.gamespot.com/articles/the-last-of-us-wins-gdc-game-of-the-year-award/1100-6418420/

Järvinen, A. (2009). Understanding Video Games as Emotional Experiences. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 85-108). New York: Routledge.

Jenkins, H. (2004). Game Design as Narrative Architecture. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 118-130). United States of America: The MIT Press.

Juul, J. (2001). Games Telling Stories. *Game studies*, *1*(1), Retrieved from http://www.gamestudies.org/0101/juul-gts/

Juul, J. (2009). Appendix - Ludology. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 331-388). New York: Routledge.

Juul, J. (2011) *half-real: Video Games between Real Rules and Fictional Worlds*. United States of America: MIT Press.

Klevjer, R. (2002). In Defense of Cutscenes. In Mäyrä, F. (Ed.), *Computer Games and Digital Cultures Conference Proceedings* (pp. 191-202). Retrieved from http://www.digra.org/digital-library/forums/1-cgdc/

Konzack, L. (2009). Philosophical Game Design. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 33-44). New York: Routledge.

Lankoski, P., & Björk, S. (2015). Formal Analysis of Gameplay. In Lankoski, P., & Björk, S. (Eds.), *Game Research Methods* (pp. 23-36). Retrieved from http://press.etc.cmu.edu/content/game-research-methods-overview

Lieberoth, A., & Roepstorff, A. (2015). Mixed methods in game research. In Lankoski, P., & Björk, S. (Eds.), *Game Research Methods* (pp. 271-289). Retrieved from http://press.etc.cmu.edu/content/game-research-methods-overview

Mäyrä, F. (2009). Getting into the Game: Doing Multidisciplinary Game Studies. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 313-330). New York: Routledge.

Majewski, J. (2003). *Theorising Video Game Narrative* (Masters Thesis, Bond University, Australia) Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.110.4404

McMahan, A. (2003). Immersion, Engagement and Presence: A Method for Analyzing 3-D Video Games. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader*, (pp. 67-86). United States of America: Routledge.

Miller, G., & Moriarty, C. (2016, August 23). *Top 10 PS4 Games (2016 Edition) – PS I Love You XOXO Ep. 49* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=_1QA3r95FyA&feature=youtu.be

Moriarty, C. (2013). The Last of Us Review. *IGN* Retrieved from http://au.ign.com/articles/2013/06/05/the-last-of-us-reviewign

Murray, J. (1997). Hamlet on the Holodeck. United States of America: The MIT Press

Murray, J. (2004). From Game-Story to Cyberdrama. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 1-11). United States of America: The MIT Press.

Naughty Dog. (2017). Naughtydog.com. Retrieved from http://www.naughtydog.com/company

Newman, J. (2008). *Playing with Videogames*. United States of America: Routledge.

O'Brien, L. (2013). Beyond: Two Souls. Look, don't touch. *IGN*. Retrieved from http://au.ign.com/articles/2013/10/08/beyond-two-souls-review

Onyett, C. (2007). Bioshock Review: Welcome to Rapture. *IGN*. Retrieved from http://au.ign.com/articles/2007/08/16/bioshock-review-5

Parker, F. (2012). An Art World for Artgames. *Loading… The Journal of the Canadian Game Studies Association 7*(11). 41-60. Retrieved from http://journals.sfu.ca/loading/index.php/loading/index

Pérez, B. E. L. (2014). Origami Fiction: Psychological Horror in Interactive Narrative. *Philosophy Study*, *4*(3). (210-215). Retrieved from http://www.davidpublisher.org/Home/Journal/PS

Poole, S. (2004). *Trigger happy: Videogames and the Entertainment Revolution*. United States of America: Arcade Publishing.

Raza, A. (2014). The Last of Us Is the Most Awarded Game in History by Critics. *Gearnuke*. Retrieved from http://gearnuke.com/the-last-of-us-awarded-game-history-critics/

Remenyi, D. (2012). *Case study research.* Retrieved from https://ebookcentral-proquest-com.ezproxy.aut.ac.nz/lib/aut/detail.action?docID=1622761

Ryan, M. L. (2005). Peeling the Onion: Layers of Interactivity in Digital Narrative Texts. Retrieved from: http://www.marilaur.info/onion.htm

Ryan, M. L. (2007). Beyond *Ludus*: narrative, videogames and the split condition of digital textuality. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 8-28). United Kingdom: Manchester University Press.

Rodkin, J. (2016, September 21). *Unlocked 264: Firewatch Developer Interview* [Audio Podcast/Video]. Retrieved from http://au.ign.com/articles/2016/09/22/unlocked-264-firewatch-developer-interview

Salen, K., & Zimmerman E. (2004). *Rules of Play*. United States of America: The MIT Press.

Tavinor, G. (2008). Definition of Videogames. *Contemporary Aesthetics, 7*. Retrieved from http://hdl.handle.net/2027/spo.7523862.0006.016

Tavinor, G. (2009). *The Art of Videogames*. United Kingdom: Wiley-Blackwell.

Taylor, L. N. (2002). *Video Games: Perspective, Point-of-view, and Immersion*. (Master's thesis, University of Florida, United States of America). Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.197.2375&rank=1

Wolf, M. J. P. (2007). A Brief Timeline of Video Game History. In M. J. P. Wolf (Ed), *The Video Game Explosion: A History from PONG to Playstation and Beyond* (pp. xvii-xxi). United States of America: Greenwood Press.

Zimmerman, E. (2004). Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 154-164). United States of America: The MIT Press.

Zimmerman, E. (2009). Gaming Literacy: Game Design as a Model for Literacy in the Twenty-First Century. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 23-31). New York: Routledge.

Videogames Cited

Arkane Studios. (2012 onwards). *Dishonored Series* [Videogame], Bethesda Softworks.

Atari. (1972). *Pong* [Videogame], Atari.

Bethesda Game Studios. (1997 onwards). *Fallout Series* [Videogame], Bethesda Softworks.

Blizzard Entertainment. (2004). *World of Warcraft* [Videogame], Blizzard Entertainment.

The Chinese Room. (2012). *Dear Esther* [Videogame], The Chinese Room.

The Chinese Room. (2012). *Everybody's Gone to the Rapture* [Videogame], Sony Computer Entertainment.

Crystal Dynamics. (2013). *Tomb Raider* [Videogame], Square Enix.

Cyan. (1993). *Myst* [Videogame], Broøaderbund.

Dontnot Entertainment. (2015). *Life is Strange* [Videogame], Square Enix.

Dontnot Entertainment. (n.d). *Life is Strange: Before the Storm* [Videogame], Square Enix.

The Fullbright Company. (2013). *Gone Home* [Videogame], The Fullbright Company.

Guerilla Games. (2017). *Horizon: Zero Dawn* [Videogame], Sony Interactive Entertainment

Infinity Ward. (2003 onwards). *Call of Duty Series* [Videogame], Activision.

Irrational Games. (2007 onwards). *BioShock Series* [Videogame], 2K Games.

Insomniac Games. (1998). *Spyro Series* [Videogame]. Sony Computer Entertainment.

Kojima Productions. (n.d). *Death Stranding* [Videogame], Sony Interactive Entertainment.

Mojang. (2011). *Minecraft* [Videogame], Mojang, Sony Computer Entertainment, & Microsoft Studios.

Namco. (1980 onwards). *Pac-Man* [Videogame]. Namco.

Naughty Dog. (1996 onwards). *Crash Bandicoot Series* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2013). *The Last of Us* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2014). *The Last of Us Remastered* [Videogame], Sony Computer Entertainment.

Naughty Dog. (n.d). *The Last of Us: Part II* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2007 onwards). *Uncharted Series* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2007). *Uncharted: Drake's Fortune* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2016). *Uncharted: A Thief's End* [Videogame], Sony Computer Entertainment.

Naughty Dog. (n.d). *Uncharted: The Lost Legacy* [Videogame], Sony Computer Entertainment.

Nintendo. (1985). *Super Mario Bros Series* [arcade, Videogame], Nintendo.

Numinous Games. (2016). *That Dragon, Cancer* [Videogame]. Numinous Games.

Psyonix. (2015). *Rocket League* [Videogame], Psyonix.

Quantic Dream. (2013). *Beyond: Two Souls* [Videogame], Sony Computer Entertainment.

Quantic Dream. (n.d). *Detroit: Become Human* [Videogame], Sony Computer Entertainment.

Quantic Dream. (2013). *Heavy Rain* [Videogame], Sony Computer Entertainment.

Rockstar. (1997 onwards). *Grand Theft Auto Series* [Videogame]. Rockstar Games.

Rockstar. (2001). *Grand Theft Auto III* [Videogame]. Rockstar Games.

Rockstar San Diego. (2010). *Red Dead Redemption* [Videogame], Rockstar Games.

Sega. (1984 onwards). *Tetris* [Videogame], Sega.

Supermassivegames. (2015). *Until Dawn* [Videogame], Sony Computer Entertainment.

Telltale. (2016). *Telltale's Batman* [Videogame], USA: Telltale.

Telltale. (2013 onwards). *Telltale's The Walking Dead Series* [Videogame], USA: Telltale.

Telltale. (2013-2014). *Telltale's The Wolf Among Us* [Videogame], USA: Telltale.

Thatgamecompany. 2012. Journey [Videogame], Sony Computer Entertainment.

Variable State. (2016). *Virginia* [Videogame], 505 Games.

Bibliography

Aarseth, E (1997). Cybertext: Perspectives on Ergodic Literature. United States of America: John Hopkins University Press.

Aarseth, E. (2004). Genre Trouble: Narrativism and the Art of Simulation. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game.* (pp. 45-55). United States of America: The MIT Press.

Arkane Studios. (2012 onwards). *Dishonored Series* [Videogame], Bethesda Softworks.

Arsenault, D. Perron, B. (2004). In the Frame of the Magic Cycle: The Circle(s) of Gameplay. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 109-132). New York: Routledge.

Arsenault, A. (2009). Appendix – Narratology. In B. Perron, & M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 331-388). New York: Routledge.

Atari. (1972). *Pong* [Videogame], Atari.

Atkins, B. (2007). Killing time: time past, time present, and time future in Prince of Persia: The Sands of Time. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 237-253). United Kingdom: Manchester University Press.

Atkins, B., & Krzywinska, T. (2007). Introduction: videogame, player, text. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 1-7). United Kingdom: Manchester University Press.

Baranowski, !., Buday, P., Thompson, D. I., & Baranowski, J. (2008). Playing for Real: Video Games and Stories for Health-Related Behaviour Change. *American Journal of Preventive Medicine, 34*(1), 74-82. doi: 10.1016/j.amepre.2007.09.027

Berger, R. and Mcdougall, J. (2013). Reading videogames as (authorless) literature. *Literacy, 47*(3), 142-149. doi: 10.1111/lit.12004

Bethesda Game Studios. (1997 onwards). *Fallout Series* [Videogame], Bethesda Softworks.

Bizzocchi, J. (2007) Games and Narrative: An Analytical Framework. *Journal of the Canadian Games Studies Association*, *1*(1), 1-10. Retrieved from http://journals.sfu.ca/loading/index.php/loading/index

Bizzocchi, J., & Tanenbaum, J. (2012). Mass effect 2: A case study in the design of game narrative. *Bulletin of Science, Technology & Society*, *32*(5), 393-404. doi: 10.1177/0270467612463796

Blizzard Entertainment. (2004). *World of Warcraft* [Videogame], Blizzard Entertainment.

Bolter, J. D., & Grusin, R. (1999). *Remediation Understanding New Media*. United States of America: The MIT Press.

Bogost, Ian. (2007). *Persuasive games The Expressive Power of Videogames.* United States of America: The MIT Press.

British Academy of Film and Television Arts (2014). Bafta.org. Retrieved from http://awards.bafta.org/keyword-search?keywords=The+Last+of+Us

Campo Santo. (2016). *Firewatch* [Videogame], Panic.

Cassidy, S. (2011). The Videogame as Narrative. *Quarterly review of Film and Video, 28*(4), 292-306. doi: 10509200902820266

Castronove, E., Bell, M. W., Cornell, R., Cummings, J. J., Falk, M., . . . Field, A. (2004). Synthetic Worlds as Experimental Instruments. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 273-294). New York: Routledge.

Cheng, P. (2007). Waiting for something to happen: Narratives, interactivity and agency and the video game cut-scene. In *Situated Play, Proceedings of DiGRA 2007 Conference, 4*, 15-24. Retrieved from http://www.digra.org/digital-library/forums/4-situated-play/

The Chinese Room. (2012). *Dear Esther* [Videogame], The Chinese Room.

The Chinese Room. (2012). *Everybody's Gone to the Rapture* [Videogame], Sony Computer Entertainment.

Coleridge, S. T. (1984). Biographia literaria, or, Biographical sketches of my literary life and opinions (Vol. 75). New York: Princeton University Press.

Consalvo, M. (2009). Lag, Language, and Lingo: Theorizing Noise in Online Game Spaces. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 295-312). New York: Routledge.

Crawford, C. (2003). Chris Crawford on game design. United States of America: New Riders.

Crawford, C. (2005). *Chris Crawford on Interactive Storytelling*. United States of America: New Riders.

Crawford, G., & Rutter, J. (2007). Playing the Game: Performance in Digital Game Audiences. In J. Gray, C. Sandvoss, & C. L. Harrington (Eds.), *Fandom: Identities and Communities in a Mediated World* (pp. 271-284). United States of America, New York University Press.

Crawford, C. (2013). *Chris Crawford on Interactive Storytelling* (2nd ed.). United States of America: New Riders.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed.). United States of America: Sage Publications.

Crystal Dynamics. (2013). *Tomb Raider* [Videogame], Square Enix.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.

Cyan. (1993). *Myst* [Videogame], Broøaderbund.

Dontnot Entertainment. (2015). *Life is Strange* [Videogame], Square Enix.

Dontnot Entertainment. (n.d). *Life is Strange: Before the Storm* [Videogame], Square Enix.

Elson, M., Breuer, J., Ivory, J. D., & Quandt, T. (2014). More than stories with buttons: Narrative, mechanics, and context as determinants of player experience in digital games. *Journal of Communication*, *64*(3), 521-542. doi: 10.1111/jcom.12096

Entertainment Software Association. (2015). *2015 Sales, Demographics, and Usage Data: Essential Facts about the Computer and Video Game Industry.* [PDF] Retrieved from http://www.theesa.com/about-esa/esa-annual-report/

Fernández-Vara, C. (2015). *Introduction to Game Analysis*. United States of America: Routledge.

Eskelinen, M. (2004). Towards Computer Game Studies. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 36-44). United States of America: The MIT Press.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry*, *12*(2), 219-245. doi: 10.1177/1077800405284363

Frasca, G. (2003). Ludologists love stories, too: notes from a debate that never took place. Retrieved from http://ludology.org

Frasca, G. (2004). Videogames of the Oppressed: Critical Thinking, Education, Tolerance, and Other Trivial Issues. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 85-94). United States of America: The MIT Press.

Frasca, G. (2007). Ludology meets Narratology: Similitude and differences between (video)games and narrative. Retrieved from http://ludology.org

The Fullbright Company. (2013). *Gone Home* [Videogame], The Fullbright Company.

Genvo, S. (2009). Understanding Digital Playability. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 133-149). New York: Routledge.

Getty, T., Miller, G., & Moriarty, C. (2017, February 28). *Gender Diversity in Games – Kind Funny Gamescast Ep. 109 (Pt.2)* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=8Z0TpusDvxs&feature=youtu.be

Giant Sparrow. (2012). *The Unfinished Swan* [Videogame], Sony Computer Entertainment.

Guerilla Games. (2017). *Horizon: Zero Dawn* [Videogame], Sony Interactive Entertainment.

Hatfield, D., Davis, J., Petty, J., & Claiborn, S. (2016, September 29) *Why Videogame Movies Don't Word – Gamescoop! 407* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=G50JuEHcIEY

Haywald, J. (2014). The Last of Us wins GDC game of the year award. *Gamespot* Retrieved from http://www.gamespot.com/articles/the-last-of-us-wins-gdc-game-of-the-year-award/1100-6418420/

Horswill, I. D., Monfort, N., & Young, R. M. (2014). Guest Editorial: Computational Narrative and Games. *Computational Inteligence and AI in Games, IEEE Transactions, 6*(2), 93-96. doi: 10.1109/TCIAIG.2014.2325879.

Infinity Ward. (2003 onwards). *Call of Duty Series* [Videogame], Activision.

Insomniac Games. (1998). *Spyro Series* [Videogame]. Sony Computer Entertainment.

Ip, B. (2011). Narrative Structures in Computer and Video Games: Part 1: Context, Definitions, and Initial Findings. *Games and Culture, 6*(2), 103-134. doi: 10.1177/155541201036498 2

Ip, B. (2011). Narrative Structures in Computer and Video Games: Part 2: Emotions, Structures, and Archetypes. *Games and Culture, 6*(3), 103-134. doi: 10.1177/1555412010364984

Irrational Games. (2007 onwards). *BioShock Series* [Videogame], 2K Games.

Irrational Games. (2013). *BioShock Infinite* [Videogame], 2K Games.

Järvinen, A. (2009). Understanding Video Games as Emotional Experiences. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 85-108). New York: Routledge.

Jenkins, H. (1998). "Complete Freedom of Movement" : Video Games as Gendered Play Spaces. In J. Cassell, & H. Jenkins (Eds.). *From Barbie to Mortal Kombat* (pp. 262-297). United States of America: The MIT Press.

Jenkins, H. (2004). Game Design as Narrative Architecture. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 118-130). United States of America: The MIT Press.

Juul, J. (2001). Games Telling Stories. *Game studies*, *1*(1), Retrieved from http://www.gamestudies.org/0101/juul-gts/

Juul, J. (2004). Introduction of Game Time. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 131-142). United States of America: The MIT Press.

Juul, J. (2007). Without a goal: on open and expressive games. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 191-203). United Kingdom: Manchester University Press.

Juul, J. (2009). Appendix - Ludology. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 331-388). New York: Routledge.

Juul, J. (2011) *half-real: Video Games between Real Rules and Fictional Worlds*. United States of America: MIT Press.

Kirkpatrick, G. (2011). *Aesthetic Theory and the Videogame.* United Kindom and New York: Manchester University Press.

Klevjer, R. (2002). In Defense of Cutscenes. In Mäyrä, F. (Ed.), *Computer Games and Digital Cultures Conference Proceedings* (pp. 191-202). Retrieved from http://www.digra.org/digital-library/forums/1-cgdc/

Kojima Productions. (n.d). *Death Stranding* [Videogame], Sony Interactive Entertainment.

Konzack, L. (2009). Philosophical Game Design. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 33-44). New York: Routledge.

Kower, R., Festi, R., & Quandt, T. (2014). Unpopular, overweight, and social inept: reconsidering the stereotype of online gamers. *Cyberpsychology, behavior and social networking, 17*(3), 141-146. doi: 10.1089/cyber.2013.0118

Krzywinska, T. (2007). Being a determined agent in (the) Word of Warcraft: text/play/identity. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 101-138). United Kingdom: Manchester University Press.

Lankoski, P., & Björk, S. (2015). Formal Analysis of Gameplay. In Lankoski, P., & Björk, S. (Eds.), *Game Research Methods* (pp. 23-36). Retrieved from http://press.etc.cmu.edu/content/game-research-methods-overview

Level-5. (2010). *Ni no Kuni: Wrath of the White Witch* [Videogame], Bandai Namco Entertainment.

Lieberoth, A., & Roepstorff, A. (2015). Mixed methods in game research. In Lankoski, P., & Björk, S. (Eds.), *Game Research Methods* (pp. 271-289). Retrieved from http://press.etc.cmu.edu/content/game-research-methods-overview

Mäyrä, F. (2009). Getting into the Game: Doing Multidisciplinary Game Studies. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 313-330). New York: Routledge.

Majewski, J. (2003). *Theorising Video Game Narrative* (Masters Thesis, Bond University, Australia) Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.110.4404

McMahan, A. (2003). Immersion, Engagement and Presence: A Method for Analyzing 3-D Video Games. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader*, (pp. 67-86). United States of America: Routledge.

McMahan, A. (2007). Second Life: the game of virtual life. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 158-174). United Kingdom: Manchester University Press.

Mc Shea, T. (2013). A tale of ghostly intrigue. *Gamespot*. Retrieved from http://www.gamespot.com/reviews/beyond-two-souls-review/1900-6415418/

Miller, G., & Moriarty, C. (2016, August 23). *Top 10 PS4 Games (2016 Edition) – PS I Love You XOXO Ep. 49* [Audio Podcast/Video]. Retrieved from https://www.youtube.com/watch?v=_1QA3r95FyA&feature=youtu.be

Mojang. (2011). *Minecraft* [Videogame], Mojang, Sony Computer Entertainment, & Microsoft Studios.

Moriarty, C. (2013). The Last of Us Review. *IGN* Retrieved from http://au.ign.com/articles/2013/06/05/the-last-of-us-reviewign

Murray, J. (1997). Hamlet on the Holodeck. United States of America: The MIT Press

Murray, J. (2004). From Game-Story to Cyberdrama. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 1-11). United States of America: The MIT Press.

Myers, D. (2004). The Video Game Aesthetic: Play as Form. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 45-64). New York: Routledge.

Namco. (1980 onwards). *Pac-Man* [Videogame]. Namco.

Naughty Dog. (1996 onwards). *Crash Bandicoot Series* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2013). *The Last of Us* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2014). *The Last of Us Remastered* [Videogame], Sony Computer Entertainment.

Naughty Dog. (n.d). *The Last of Us: Part II* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2007 onwards). *Uncharted Series* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2007). *Uncharted: Drake's Fortune* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2016). *Uncharted: A Thief's End* [Videogame], Sony Computer Entertainment.

Naughty Dog. (n.d). *Uncharted: The Lost Legacy* [Videogame], Sony Computer Entertainment.

Naughty Dog. (2017). Naughtydog.com. Retrieved from http://www.naughtydog.com/company

Nintendo. (1985). *Super Mario Bros Series* [Videogame], Nintendo.

Nixon, M. & Bizzocchi, B. (2013). Press X for Meaning: Interaction Leads to Idetification in Heavy Rain. *Proceedings of DiGRA 2013: DeFragging Game Studies, 7*, 1-14. Retrieved from http://www.digra.org/digital-library/

Newman, J. (2008). *Playing with Videogames*. United States of America: Routledge.

Numinous Games. (2016). *That Dragon, Cancer* [Videogame]. Numinous Games.

O'Brien, L. (2013). Beyond: Two Souls. Look, don't touch. *IGN*. Retrieved from http://au.ign.com/articles/2013/10/08/beyond-two-souls-review

Onyett, C. (2007). Bioshock Review: Welcome to Rapture. *IGN*. Retrieved from http://au.ign.com/articles/2007/08/16/bioshock-review-5

Parker, F. (2012). An Art World for Artgames. *Loading… The Journal of the Canadian Game Studies Association 7*(11). 41-60. Retrieved from http://journals.sfu.ca/loading/index.php/loading/index

Pérez, B. E. L. (2014). Origami Fiction: Psychological Horror in Interactive Narrative. *Philosophy Study*, *4*(3). (210-215). Retrieved from http://www.davidpublisher.org/Home/Journal/PS

Pérez Latorre, O. (2013). The European videogame: An introduction to its history and creative traits. *European Journal of Communication, 28*(2), 136-151. doi: 10.1177/0267323113477365

Perlin, K. (2004). Can There Be a Form between a Game and a Story?. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 12-18). United States of America: The MIT Press.

Playdead. (2010). *Limbo* [Videogame], Playdead.

Poole, S. (2004). *Trigger happy: Videogames and the Entertainment Revolution*. United States of America: Arcade Publishing.

Psyonix. (2015). *Rocket League* [Videogame], Psyonix.

Raza, A. (2014). The Last of Us Is the Most Awarded Game in History by Critics. *Gearnuke*. Retrieved from http://gearnuke.com/the-last-of-us-awarded-game-history-critics/

Quantic Dream. (2013). *Beyond: Two Souls* [Videogame], Sony Computer Entertainment.

Quantic Dream. (n.d). *Detroit: Become Human* [Videogame], Sony Computer Entertainment.

Quantic Dream. (2013). *Heavy Rain* [Videogame], Sony Computer Entertainment.

Remenyi, D. (2012). *Case study research.* Retrieved from https://ebookcentral-proquest-com.ezproxy.aut.ac.nz/lib/aut/detail.action?docID=1622761

Rockstar. (1997 onwards). *Grand Theft Auto Series* [Videogame]. Rockstar Games.

Rockstar. (2001). *Grand Theft Auto III* [Videogame]. Rockstar Games.

Rockstar San Diego. (2010). *Red Dead Redemption* [Videogame], Rockstar Games.

Ryan, M. L. (2005). Peeling the Onion: Layers of Interactivity in Digital Narrative Texts. Retrieved from: http://www.marilaur.info/onion.htm

Ryan, M. L. (2007). Beyond *Ludus*: narrative, videogames and the split condition of digital textuality. In B. Atkins, & T. Krzywinska (Eds.), *Videogame, player, text* (pp. 8-28). United Kingdom: Manchester University Press.

Rodkin, J. (2016, September 21). *Unlocked 264: Firewatch Developer Interview* [Audio Podcast/Video]. Retrieved from http://au.ign.com/articles/2016/09/22/unlocked-264-firewatch-developer-interview

Salen, K., & Zimmerman E. (2004). *Rules of Play*. United States of America: The MIT Press.

Scultz, W. (2017). *AAA Game*. ThoughtCo. Retrieved from http://gameindustry.about.com/od/glossary/g/Aaa-Game.htm

Sega. (1984 onwards). *Tetris* [Videogame], Sega.

Shaw, A. Rethinking Game Studies: A case study approach to video game play and identification. *Critical Studies in Media Communication, 30*(5), 347-361. doi: 10.1080/15295036.2012.701013

Squire, K. (2006). From Content to Context: Videogames as Designed Experiences. *Educational Researcher, 35*(8), 19-29. doi: 10.3102/0013189X035008019

Supermassivegames. (2015). *Until Dawn* [Videogame], Sony Computer Entertainment.

Tavinor, G. (2008). Definition of Videogames. *Contemporary Aesthetics, 7*. Retrieved from http://hdl.handle.net/2027/spo.7523862.0006.016

Tavinor, G. (2009). *The Art of Videogames*. United Kingdom: Wiley-Blackwell.

Taylor, L. N. (2002). *Video Games: Perspective, Point-of-view, and Immersion*. (Master's thesis, University of Florida, United States of America). Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.197.2375&rank=1

Team Bondi. (2011). *L.A. Noir* [Videogame], Rockstar Games.

Telltale. (2016). *Telltale's Batman* [Videogame], USA: Telltale.

Telltale. (2013 onwards). *Telltale's The Walking Dead Series* [Videogame], USA: Telltale.

Telltale. (2013-2014). *Telltale's The Wolf Among Us* [Videogame], USA: Telltale.

Thatgamecompany. (2009). *Flower* [Videogame], Sony Computer Entertainment.

Thatgamecompany. 2012. Journey [Videogame], Sony Computer Entertainment.

Tschang, F. (2005). Videogames as interactive experiential products and their manner of development. *International Journal of Innovation Management, 9*(1), 103-131. doi: 10.1142/S1363919605001198

Valve Corporation. (2011). *Portal 2* [Videogame],Valve Corporation.

Variable State. (2016). *Virginia* [Videogame], 505 Games.

Walsh, R. (2011). Emergent Narrative in Interactive Media. *Narrative, 19*(1), 72-85. doi: 10.1353/nar.2011.0006

Wolf, M. J. P. (2007). A Brief Timeline of Video Game History. In M. J. P. Wolf (Ed), *The Video Game Explosion: A History from PONG to Playstation and Beyond* (pp. xvii-xxi). United States of America: Greenwood Press.

Zilber, B. T., Tuval-Mashiach, R., & Lieblich, A. (2008). The Embedded Narrative: Navigating Through Multiple Contexts. *Qualitative Inquiry, 14*(6). 1047- 1069. doi: 10.1177/1077800408321616

Zimmerman, E. (2004). Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline. In N. Wardrip-Fruin, & P. Harrigan (Eds.), *First Person New Media as Story, Performance, and Game* (pp. 154-164). United States of America: The MIT Press.

Zimmerman, E. (2009). Gaming Literacy: Game Design as a Model for Literacy in the Twenty-First Century. In B. Perron, and M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 23-31). New York: Routledge.

7780s Studio. (n.d). *P.T* [Videogame], Konami.

Appendices

Appendix A: ***The Last of Us*** **plot and chapter summary**

Act I - Exposition

Chapter 1: *Prologue*

Act I, chapter 1 introduces *The Last of Us* world through Sarah who is Joel's daughter. A cutscene shows Sarah staying up late to give Joel a watch as a birthday present. After being put to bed by Joel, Sarah wakes up to strange noises and goes to investigate them. She finds the door of their home open and Joel running through the house shooting their neighbour who seems to have gone mad. Joel's brother, Tommy shows up and the three attempt to flee the by car. Since the town is in chaos, a bus drives into the side of the van leaving the characters to get away on foot. Sarah's ankle is badly hurt so this time, the player controls Joel. Just outside the town, a military soldier shoots at Sarah and Joel after receiving orders on his radio. Joel is about to be shot in the head before Tommy shoots the soldier first. After being saved, Joel realises that Sarah has been shot in the stomach and she dies in his arms.

Act II - Exposition/Call to action

Chapter 2: *Quarantine Zone*

Act III provides additional background information for the larger story and sets the hero's "call to action". chapter 2 introduces the player to Joel twenty years after the incident in the prologue. In the Quarantine Zone, Joel and Tess go on a short mission to retrieve goods as part of a trade from Robert. After defeating some of Robert's men as a way of introducing the gaming mechanics, Joel and Tess discover that Robert has actually traded their belongings to the Fireflies. Marlene, head of the Fireflies offer's Joel and Tess their belongings back and more in exchange for a favour. Marlene asks them to smuggle a teenager named Ellie outside of the Quarantine Zone and into Firefly custody just outside the city.

Chapter 3: *The Outskirts*

Soldiers catch the three trying to escape and scan them for any infection. Ellie stabs one of the soldiers in the leg just as she is scanned. After defeating the other soldiers, Tess picks up the scanner that shows she is infected. More soldiers are heading for them so they flee to safety before discussing what to do. Ellie insists that she is immune from the infection and Joel and Tess reluctantly agree to continue on their mission. After making their way through derelict cityscapes filled with Infected, the mission goes awry when the Fireflies are found dead and an Infected bites Tess. Tess desperately attempts to find some sort of clue as to where the Fireflies are and Joel asks Tess *"how far are we gonna take this?"* She says to Joel *"this is our chance … there's enough here that you have to feel some sort of obligation to me so you get her to Tommy's"* (Tommy as a former Firefly may know where they are). Joel has to act quickly as more soldiers are approaching them. He decides to fight through the city and continue pursuing the now, much larger mission that will span across the entire game.

Act III - Rising action/Climax

Chapter 4: *Bill's Town*

In Act III, the player faces a series of challenges and setbacks from different enemies and Infected. In *Bill's Town* the task is to obtain a car. To do this, the characters find Bill, an odd man who may be able to source one. After navigating through the town and being stuck in one of his traps, Bill eventually finds them. Joel asks for a car and Bill laughs saying *"If I had a car, which I sure as hell don't, what makes you think I would give it to you?"* Bill reluctantly agrees to help them source a battery to put in another car so they can leave his town. The three set out through the town to reach the High School, where a military van recently crashed. After making their way through Infected, they discover the battery had already been taken and flee to a nearby house. They find Bill's partner hanged in the living room because he had been bitten and find the battery that he had taken first fixed in a car in the garage. After jump-starting the car, the characters go their separate ways.

Chapter 5: *Pittsburgh*

After driving for some time, Joel discovers that the highway has been blocked by piled-up cars so has no choice but to go through the city. A man who looks hurt walks into the middle of the road in front of them and Ellie suggests that they should stop and help him. Instead, Joel accelerates trying to run him over because it is a trap. The man shoots at Joel, causing him to crash into a nearby shop. The player must now defeat these men, working their way through the city to reach a yellow bridge, which is their way out. After finding two more survivors (Henry and Sam) that are also attempting to get out of the city, they discover that bandits are heavily guarding the bridge. The four almost make it to the bridge by overcoming the bandits quietly. But then the characters are separated and Joel and Ellie attempt to find another way around the fences. Eventually, they do so, but the bandits are close behind them, equipped with a military truck. After discovering the bridge is no longer intact, the only option left is to jump.

Chapter 6: *The Suburbs*

Joel and Ellie reunite with Henry and Sam as they are swept down the river. The four find an underground tunnel and make their way through. They discover that was once a settlement of people living in the tunnel complete with a nursery and school have all turned into Infected. Eventually, they make it out and begin to walk through some suburban houses. A sniper begins shooting at them so Joel navigates around the back to stop him while other men are attacking from the ground. After defeating more men, the suburban area becomes covered with Infected and the four characters flee. After resting, Ellie discovers that Sam has been bitten and Joel shoots him. Henry, overcome with grief shoots himself.

Chapter 7: *Tommy's Dam*

Joel and Ellie make their way to Tommy's Dam because he may know where the Fireflies are. While this is what Ellie believes they are doing, Joel has other intentions. The two are invited into the Dam and help to get the generators back up and running. Then bandits come in and try to rob them. Joel, Tommy and his men defeat the bandits. Joel asks Tommy if he would continue taking Ellie to the Fireflies claiming, *"that was your cause"*. When Ellie discovers this, she takes one of the horses and runs off. Joel and Tommy set out to find her, fighting off other bandits along the way. After returning to the Dam, Joel decides that he should be the one to

take her. Tommy gives them a horse to use and suggests they try going to The University of Eastern Colorado, which had a lab set up in the science building.

Chapter 8: *The University*

In this chapter, Joel and Ellie navigate through the University and discover that the Fireflies are no longer in the lab. Tape recordings from some of the scientists suggest where they should go. While in the science building, men begin to shoot at Joel and Ellie. Joel is tackled by one of the men and falls on the ground floor, landing on a metal rod that sticks out of his side. Joel moves very slowly trying to get to the horse.

Chapter 9: *Lakeside Resort*

Ellie saves Joel by finding shelter and food. While out hunting she comes across a group of travellers who kidnap her. Although these travellers were initially friendly, they turn out to be from the same group of men Ellie and Joel had encountered and killed throughout their journey. Joel attempts to save Ellie after he regains consciousness to find that she is already saving herself. This chapter represents the first climax in the game.

Chapter 10: *Bus Depot*

Bus Depot serves as the final Infected challenge of the game. Joel and Ellie must travel through a large highway tunnel to get to the Fireflies' new medical facility. In this tunnel are massive numbers of Runners and Clickers as well as three Bloaters. After defeating this set of Infected, the characters walk along an unstable vent because there is a dangerous torrent of water flowing through part of the tunnel. A bus becomes unhinged as the characters try to walk across it. The two fall into the water. Joel saves Ellie, who is now unconscious, and tries to resuscitate her when they are out of the water. At this point, Firefly soldiers knock Joel unconscious for not obeying their orders.

Chapter 11: *Firefly Lab*

The second climax of the game happens when Joel and Ellie reach the Firefly Lab. After waking in a hospital, Joel is told by Marlene that to make her contribution to the world, Ellie's brain will need to be dissected. Joel, after the course of the game and the events in the previous chapter, decides to risk all and attack the Fireflies to save Ellie. He fights through soldiers to get Ellie

back and carries her through the hallways finding an elevator that takes him down to a parking lot where Marlene is waiting for him. She pleads with him to let Ellie go.

Act IV - Resolution

Chapter 12: *Jackson*

In Act IV, the final cutscene flicks between past and present. It shows Joel retelling Ellie what happened at the Firefly Lab. It is revealed to the player that Joel chooses to shoot Marlene explaining, "*you would just come after her".* Joel tells Ellie that there were other immune people the Fireflies where researching and that it didn't help. Joel and Ellie return to Tommy's settlement. Walking through a short forest, Joel talks to Ellie about how she would have been Sarah's friend. Ellie is noticeably upset and confronts Joel about what really happened with the Fireflies. Joel tells Ellie that everything he said was true.

Appendix B: **Guide to *The Last of Us***

Characters

Below is a table of the central characters in *The Last of Us* in order of appearance in the game.

CHARACTER	EXPLANATION
Sarah	Joel's teenage daughter
Joel	Protagonist, hero
Tommy	Joel's brother, former Firefly
Tess	Joel's close friend
Marlene	Head Firefly, friend of Ellie's mother
Ellie	Immune teenager
Bill	Helps Joel source a car, friend of Tess
Henry and Sam	Brothers, Sam becomes Ellie's friend and his death affects her
David	Leader of the cannibalistic survival group, kidnaps Ellie

Table B-1: Character breakdown

Source: Cameron

Terminology

Below is a table of important terms in *The Last of Us* that are needed for understanding specific details of the plot and game.

TERM	EXPLANATION
Infected: *Runners* *Stalkers* *Clickers* *Bloaters*	A type of zombie "monster". In *The Last of Us*, the infection refers to the cordyceps fungus that takes over the host's brain stem covering them in large fungal plates. A person can become infected by being bitten or by inhaling large spores.
Fireflies	The Fireflies are a part of the rebel organisation that revolts against the Quarantine Zone's poor living conditions. The Fireflies are also dedicated to finding a cure for humankind unlike the other military-operated areas that accept the world for what it is.
Quarantine Zone	The Quarantine Zones are like ghetto's that claim to protect people from Infection, but are operated by the military with a distinct imbalance of power.
Crafting	Crafting is a mechanic used throughout the game where players can take supplies found while exploring the environment and make something more useful such as a new weapon or health kit.

Table B-2: Important terms

Source: Cameron

Items found

(Mentioned in chapter 5)

There are a variety of additional items that can be found throughout the game including crafting upgrades, letters left behind from survivors and Firefly medallions. Below is an example of just one of these items found in *Bill's Town*, which supplements the additional dialogue when Joel asks Bill if he is all right after discovering Frank. It reads,

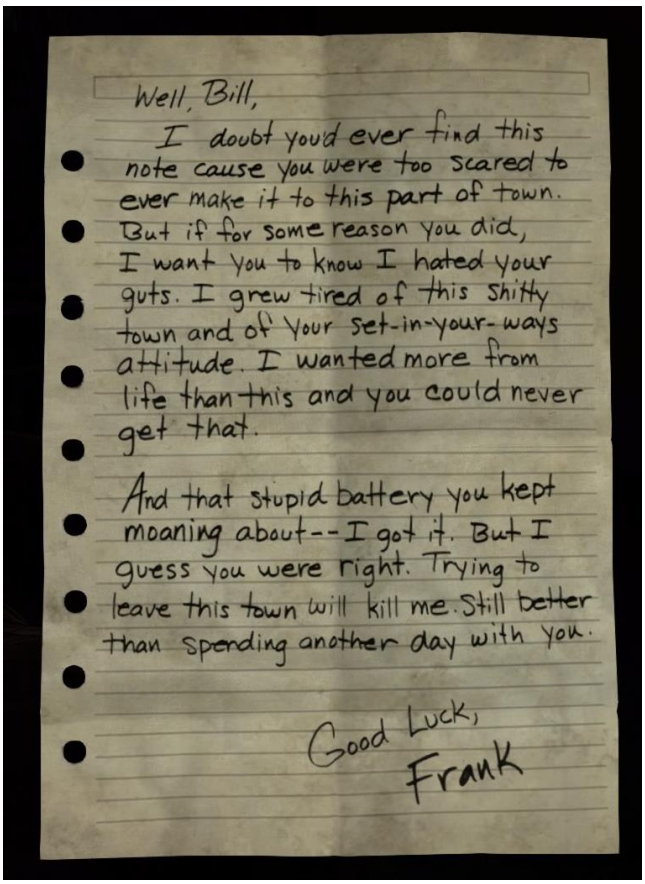

Fig. B-1: Frank's note
Source: *The Last of Us Remastered* (Naughty Dog, 2014)

Well Bill, I doubt you'd ever find this note cause you were too scared to ever make it to this part of town. But if for some reason you did, I want you to know I hated your guts. I grew tired of this shitty town and of your set-in-you-ways attitude. I wanted more from life than this and you could never get that.

And that stupid battery you kept moaning about – I got it. But I guess you were right. Trying to leave this town will kill me. Still better than spending another day with you.

Good Luck,
Frank

Supplies found

Below is a table of the supplies available for discovery in *The Last of Us*. This shows a large variety of content for interaction. Already-crafted items such as shivs or health kits can also be found sparsely throughout the game.

ITEM	CRAFTING
Blades	Shivs, nail bombs, melee upgrade
Binding	Shivs or melee upgraders
Rag	Health kit, molotov
Alcohol	Health kit, mototov
Sugar	Head Firefly, friend of Ellie's mother
Explosives	Nail bomb, smoke bomb
Ammunition	Used in weapons

Table B-3: Supplies

Source: Cameron

Weapons

There are a large variety of items that can be used in different scenarios throughout *The Last of Us*. The table below shows the variety of pistols, long guns, melee weapons and crafted weapons that can be used throughout the game. Specific weaponry is necessary for defeating certain types of enemies but the choice of weapon is also largely up to the player.

TYPE OF WEAPON	WEAPON
Pistols	Revolver
	9mm Pistol
	El Diablo
	Shorty
Long Guns	Hunting Rifle
	Shotgun
	Bow
	Military Sniper
	Flamethrower
	Assault Rifle
Melee	2x4 plank

	Baseball Bat
	Pipe
	Hatchet
	Switchblade
	Machete
	Brick
	Bottle
Crafted Weapons	Shiv
	Molotov
	Nail Bomb
	Smoke Bomb

Table B-4: Weapons

Source: Cameron

Appendix C: **Cited Videogame Description**

TITLE	TYPE	GENRE	DESCRIPTION	YEAR
Telltale's Batman	Episodic	Interactive/branching story	This version of *Batman* follows the classic Telltale formula. The player controls Batman, who faces a series of challenging circumstances that center around dialogue choices and quick-time-events. Making particular choices determines the kind of story that unfolds.	2016
Beyond: Two Souls	Third-person /Branching story	Action/Adventure	*Beyond: Two Souls* uses motion capture technology to present the player with a highly realistic and immersive story. The player's are able to determine the outcome of the story with choice-based gameplay. The player controls Jodie throughout her life out of chronological order. Jodie has special abilities to communicate with an entity that was attached to her since birth. The aim is to experience her life in childhood, in the CIA, and with being homeless.	2013
BioShock Series	FPS	Action/Adventure	The player enters *BioShock* in a haze of confusion. A disoriented man in first-person is seen descending down into Rapture, an underwater city. Once inside, a man contacts the protagonist appearing to help him through the collapsing city. As a first-person shooter, the gameplay is centered around shooting the gone-made residents of Rapture in order to escape and figure out who the character actually is.	2007 - onwards
Call of Duty Series	FPS	Co-op/Action	*Call of Duty* is a FPS game where players engage heavily in combat sessions with Artificial Intelligence (AI) or with other players online. There is also a campaign mode that the player can play through however; this is not the main reason to play *Call of Duty*. The main objective is to win missions through statistics.	2003 - onwards
Crash Bandicoot Series	Platformer	Action/Adventure	*Crash Bandicoot* is a 3-D platformer that incorporates other arcade-based gameplay. The player, as Crash (or Coco) advances through difficult levels and collects different items (such as crystals or fruit) to complete levels. The objectives are largely based on collecting or retrieving items loosely related to	1996

			the story so that the player can complete the game by completing each level.	
Dear Esther	Short	Indie/Alternative	*Dear Esther* is an explorative game where the aim is to read snippets from letter's left behind by a woman called Esther. Like *Everybody's Gone to the Rapture,* this is a largely observational videogame aimed to offer player's an insight into others experiences.	2012
Death Stranding	-	-	To be released.	n.d
Detroit: Become Human	-	-	To be released.	n.d
Dishonored Series	FPS	Action/Adventure	*Dishonored* follows the journey of a man who was framed for the Queen's death. In first-person, the player can choose how to approach the game (stealth or offensive) and the game then adapts to those deicisions. The aim is to rescue the Queen's daughter so she can reclaim her rightful place on the throne.	2012 - onwards
That Dragon, Cancer			*That Dragon, Cancer* is a highly emotional videogame that tracks the journey of the parents who's child has cancer (based on real life events). The aim is to give the player a window into what it was like to live through this "dragon".	2016
Everybody's Gone to the Rapture	Short	Indie/Alternative	*Everybody's Gone to the Rapture* is an abstract game that follows the lives of a small village in England. It is not clear whether the player controls a person however, the aim is to travel through this village to discover where and why everyone has disappeared. Discovering different locations unlocks the past which is told to the player through floating orbs that represent energy.	2015
Fallout Series	FPS	Action/Adventure	*Fallout* is about a post-nuclear world, overrun by radioactive threats – from air, mutants, or radioactive animals. This game allows the player to choose which missions to complete in what order. Some missions are related to the storyline however; some are called side missions that offer the player other challenges and opportunities to gain "experience" quantified by experience points or bottle caps (revenue). The player can choose how to approach the game (stealth or offensive) and the game then adapts to those deicisions.	1997 - onwards
Gone Home	Short	Indie/Alternative	*Gone Home* is about exploring an environment and unfolding the story. The	2013

			player (like the character) is unaware of what has happened before entering her families new house, having come back from college. She must search through the house to find out what has happened to her family.	
Grand Theft Auto Series	Linear/mission-based open world	Action/Adventure	The *Grand Theft Auto Series* has a range of videogame titles that include *III, IV, San Andreas, Vice City and V.* The premise among these games is largely the same: the player controls a hired criminal who completes mission-based tasks in order to gain status and wealth. Although there are central story-based missions, the game is also filled with a range of different side missions so that the player is able to choose what to engage with as they please. The central story is unable to be adapted and the results are the same from player-to-player. Despite an R18 age restriction, the game has had a range of lawsuits due to its highly controversial content.	1997 - onwards
Grand Theft Auto III	Linear/mission-based open world	Action/Adventure	In *Grand Theft Auto III*, the player controls a hired criminal who takes illegal jobs for a range people in order to advance. In the game, the player faces a range of different criminal organisations like 'The Mob', 'The Cartel' and 'The Yakuza'.	2001
Heavy Rain	Third-person/ Branching story	Action/Adventure	*Heavy Rain* enables the player to choose the outcome of the story. The player controls various characters, all working to solve the origami-killer mystery. The protagonist, a father whose son is kidnapped by the origami killer must undergo a series of morally questionable actions in order to save his son. If a character is to die because of a consequential action, they will not return to the main storyline.	2010
Horizon: Zero Dawn	Third-person/Linear RPG	Action/Adventure	*Horizon* is set in a post-apocolyptic world where humanity has had to restart because machines had taken over. The player controls a young girl, Alloy who wants to redeem her place in her tribe ever since she was cast out. Instead, the world faces a greater danger as the machines who were once peaceful have become more aggressive and life threatening. Alloy embarks on a journey to save her tribe and the rest of the world from total desctruction. Along the way, she discovers secrets about her past that relate to her destiny.	2017
Journey	Short	Indie/Alternative	Aptly named, *Journey* is a game about the journey of life and death. The player controls a creature who travels across different terrains, sometimes with a companion and sometimes without one, to reach the pias mountains. What's	2012

			beautiful about this game is that the companions are other people throughout the world playing alongside you. Each player can only communicate through their actions which leads to unpredictable, unqiue, and truly beautiful gaming experiences.	
Life is Strange	Episodic	Interactive story	*Life is Strange* is a game which explores a morality of right and wrong. The player controls Max, a budding photographer who returns to her hometown to an art school to develop her artistic practice. Max eventually develops	2015
Life is Strange: Before the Storm	Episodic	Interactive story	To be released.	n.d
Minecraft	Sandbox	Survival	*Minecraft* can be described as a digital version of lego. The objective is to travel through lands, create, mine and discover items that can be used to build other things. This game gives the player a lot of opportunity to create a game experience as they wish.	2011
Myst	First-person/ puzzle	Interactive story	Myst is an explorative game that takes the player through an environment to discover what the world (island) contains. There are a series of puzzles and it is up to the player to experiment with the space.	1993
Pac-Man	Arcade	Adventure	*Pac-Man* is an arcade game where players move a yellow circle with an opening mouth around a maze-like map in order to eat dots, fruit, and avoid ghosts. The aim is to reach high scores.	1980
Pong	Arcade	Sport	*Pong* is like a virtual game of tennis or 'Ping-Pong'. Player's move two paddles on either side of a screen with a dot moving between them. The aim is to hit the dot (or ball) across to the other player so they cannot hit it back.	1972
Red Dead Redemption	Linear/mission-based open world	Action/Adventure	*Red Dead Redemption* is a game about a former criminal turned farmer in the wild west. The player control John Marston and completes mission-based objectives in order to progress through the story. Like other Rockstar games, there are also a series of side missions or games incorporated throughout.	2010
Rocket League	Arcade	Sport	*Rocket League* is like virtual soccer with cars. There are multi-player and online options where individual players can create their own cars, unlocking new	2015

			inventory by winning and continuously playing matches.	
Spyro Series	Platformer	Adventure	*Spyro* is a 3D-platformer that follows the journey of a young dragon. The player progresses through a series of levels collecting various items along the way in order to complete the game. Like other platformers there is a loosely incorporated story but this is not the main reason to play.	1998 - onwards
Super Mario Bros. Series	3D Side scroller	Adventure	*Super Mario Bros*. has a loose story where Mario progresses through a series of challenge to save Princess Peach. The game has been a 2D, 3D sidescroller turned platformer depending on the evolving console generations. Recently, Super Mario Galaxy uses the concept of gravity to control the games rules where different gravitational rules are utilised in different places.	1985 - onwards
Tetris	Arcade	Puzzle	*Tetris* is a mechanically oriented game. The player must use a small set of keys to navigate different shaped blocks into empty spaces, and once a whole line of blocks has been made that row of blocks will disappear so that the player can keep playing. This is to achieve higher levels to beat other players.	1984
Tomb Raider	Linear	Action/Adventure	*Tomb Raider* follows the journey of Lara Croft. After Lara and her fellow travellers ship is wrecked on a remote island, she attempts to escape but that task is not as simple as it appears. The aim is to fight through a series of challenges set out linearly in order to solve the ancient mysteries on the island and escape.	2013
Uncharted: Drake's Fortune	Linear	Action/Adventure	*Uncharted: Drakes Fortune* is the first *Uncharted* in the series. As a first generation story-driven game, *Uncharted* lends itself to the first-perosn shooter genre. The aim is to discover the myster of protagonist, Nathan's Drakes lineage and fortune.	2007
Uncharted: A Thief's End	Linear	Action/Adventure	*Uncharted: A Thief's End* is the fourth game in the *Uncharted* series, largely following its predecessors but with hightened graphics, new gameplay, and a better incorporated narrative.	2016
Uncharted: The Lost Legacy	Linear	Action/Adventure	To be released.	n.d

Until Dawn	Third-person/ Branching story	Horror	*Until Dawn* is a horror-game that tracks a night in the lives of a group of teenagers who travel to a remote lodge in order to pay respects to their friend. Events in the remote lodge become increasingly dangerous and horrifying as people disappear. This game adapts to the player's choices where their decisions can determine the outcome of the plot events.	2015
Virginia	Short	Indie/Alternative	*Virginia* is an abstract game tracking the life of a FBI officer solving a difficult case. Told out of chronilogical order, the player must attempt to solve the case. The game explores the idea of friendship and morality and what it takes to become successful in such a stressful field.	2016
Telltale's The Walking Dead	Episodic	Interactive story	*The Walking Dead* follows two survivors – Joel and Clementine who attempt to survive the zombie apocalypse. Like other Telltale titles the gameplay centers around dialogue choices and quick-time-events where making particular choices determines the kind of story that unfolds.	2013
Telltale's The Wolf Among Us	Episodic	Interactive story	This game mixes up fairy-tale characters (Fables) in a contemporary distopian city-scape called Fabletown filled with murder, drugs and corruption. The player controls the sherrif, Bigby Wolf who used to be the "big-bad wolf" who is given the task of solving the murders from a serial-killer. Like other Telltale games, *The Wolf Among Us* gameplay centers around dialogue choices and quick-time-events where making particular choices determines the kind of story that unfolds.	2013 – 14
World of Warcraft	MMORPG	Adventure	*World of Warcraft* is a Massively-Multi-Online-Role-Playing-Game. Player's can create their own characters and exist in a virtual environment playing through missions as they see wish.	2004 - onwards

Table C-1: Cited videogame description

Source: Cameron