Player decentralisation: a world that doesn't revolve around you

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Abstract

This research focuses on the concept of decentralisation within contemporary single-player video games, which is identified as the effect of the game world appearing independent of the player character, or having its own agency separate from the player. The questions that the thesis seeks to answer are: What decentralisation techniques are found in contemporary single-player video games, and what do these techniques achieve?

The paper begins by defining both centralisation and decentralisation as terms within interactive media, before exploring various definitions of immersion and its related terms. A set of criteria is built from different prominent definitions of immersion that, when met, will increase a video game's immersive qualities. This criteria will be important when examining the effects that decentralising techniques have when used. It is important to note that this paper does not equate immersion with quality, and is not stating that if a game is more immersive it is automatically better.

Next, the paper explores four different methods of decentralisation: genre mechanic subversion, social realism, knowledge of unwitnessed events, and world persistence. These techniques are defined and explored through case studies that employ them. The effects of these decentralisation methods are then compared with the various criteria for immersion in order to understand how their implementation affects the games that employ them.

This research serves as an introduction to the concept of decentralisation within single-player video games, and it finds that the concept deserves more academic attention. Through comparing the conditions for immersion with what the decentralising techniques achieve, the paper concludes that decentralisation can be used to increase a game's immersive qualities, creating the impression that the game world is not reliant on the player character's presence to exist.

Author's Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for a degree or other qualification at this University or elsewhere. All sources are acknowledged as references.

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1: Introduction

Motivation for research

When playing through a single-player video game, the player is the only entity directly interacting with the media; experiencing a world built and designed around them – one that has been crafted with a single player in mind. This has led to game design tenets that understandably foreground and centralise the player experience. Prominent articles around game design prioritise “never [allowing] the player to guess what they should focus on” and “[communicating] all changes to the player” (Allmer, 2009). Unity (one of the most popular modern game engines) puts much stress on considering the player experience, highlighting the importance of designing for the player in their own published guidelines for development (Unity, no date). In the book *Fundamentals of Game Design* (2006), game designer Ernest Adams and software developer Andrew Rollings recommend a player-centric game design approach throughout, further illustrating the importance of these principles. While this advice is important to consider, it has also led to video games explicitly catering to the player, laying bare the artificiality of the game world that is being interacted with. This can be seen in many common elements found in single-player video games, ranging from world design (major events only occurring when the player character is present to witness them) to character interactions (non-playable characters only being included to give the player character hints and make their journey easier). The inclusion of these elements in single-player video games can create a strong centralising effect.

However, player centralisation, while prevalent, is not the only approach that single-player video games can adopt. Decentralising techniques can be employed that stress the agency of the world around the player character, creating the impression that it is independent of them and would carry on without them. When indie developers Mobius Digital were interviewed on their time creating *Outer Wilds* (Mobius Digital, 2019), they confirmed that it was important to them that the world felt as though it didn’t revolve around the player (Noclip, 2019). This shows that decentralising techniques are already being focused on and implemented in video games, highlighting their need for academic discussion.

If single-player games typically use centralising techniques, how could decentralising techniques be employed, and what effects might this have on the games that employ them? It is clear that decentralisation demands attention. This writing will define and analyse decentralisation as a term within video games and various techniques through which it can be achieved. It is also pertinent to examine how the implementation of these techniques affects the game experience. It may be assumed that decentralisation would have a negative impact on a game's ability to immerse, but this research makes it clear that the result of decentralisation is not that simple, and that these techniques can have positive impacts on immersion when implemented. This research moves across various genres of single-player games in an effort to explore how different techniques can be used to make a game world feel independent of the player character – as if it would carry on without their presence. It has led to the forming of the questions this paper seeks to answer: What decentralisation techniques are found in contemporary single-player video games, and what do these techniques achieve?

Thesis outline

Immersion plays a large role in answering this question, so, to start with, I will be exploring ideas around immersion and its related terms. The literature review seeks to demystify immersion and lay a solid foundation for the remainder of this paper by thoroughly investigating how this term, and others similar to it, is used in interactive media. The literature review also focuses on clearly defining both centralisation and decentralisation, as they are key terms that are applied by this thesis. Through the laying down of this groundwork, it is then possible to move into the remaining chapters with clear definitions of immersion, centralisation and decentralisation established. Following the literature review is a chapter on methodology. The reason I begin with the literature review is that it is important to establish a clear understanding of the terms being used, as this informs my research methodology.

The remaining chapters are dedicated to the unpacking of four specific techniques of decentralisation that I have identified: genre mechanic subversion, social realism, knowledge of

missed events, and world persistence. I will define what is meant by the name I have given to each technique by providing a brief explanation of how it can be achieved, before exploring the term more deeply. I will look at case studies that I feel illustrate the technique's use, and discuss how the technique's use works to create a decentralising effect, as well as how this could affect the levels of immersion in the media through textual analysis of ludological elements.

This writing is not a guide for implementing decentralisation, or a recommendation for developers to ensure its inclusion in their project, and it is important to highlight that I do not ascribe inherent value to the inclusion of such decentralisation techniques. Instead, I have identified that this effect exists within video games but has not been examined by many scholars, which makes the identification and analysis of it valuable.

2: Literature review

Key terms

The literature review will unpack key terms and their definitions and uses by a range of scholars. First, I will focus on both centralisation and decentralisation; since these are terms that are applied to represent effects within interactive media that this paper identifies, it is important to clearly define what these terms mean when used in this paper. The next term covered will be immersion, as to answer the research questions it is important to be able to analyse what effect player decentralisation has on video games. Immersion is widely considered an implicit goal of a video game experience (Jennet et al., 2008), and thus is an extremely important focus area.

Centralisation and decentralisation

To begin with, I will delve into what I have identified as a default effect that is present in traditional single-player video games: player centralisation. The only reason that a player experiences any part of a video game is their continued desire to interact with the media. In a way, this puts the player at the centre of the whole experience; their decision to keep playing is the only reason that the game world around them continues to exist. The term player centralisation refers to being made aware of this at some level when playing a game – the idea that the world's purpose is to facilitate the player's play and that without their presence it would cease to exist. For example, a game may task the player with walking through a door to reach the next section, but without the player's agreement to continue this interaction, the game is effectively over at that point, and the rest of the game world won't even be rendered. An example of this is also seen through the respawn screen of a game. By presenting this screen to the player, the game is communicating that the player character is an extremely important element of the world being interacted with and that the game world will reset for their convenience.

This leads into the second and final term that this section explores: decentralisation. This term is used to describe a player being made to feel as though they are not the centre of the game experience. This can be applied to any video game, although this paper examines it within single-

player video games selected via a specific criteria (this is described further in the methodology).To be more specific, decentralisation is applicable when the game has employed mechanical or creative strategies which assert a level of autonomy for the game world, creating the impression that the world is not reliant on the player character's presence to exist, and would continue were they to exit the game and cease any further interaction. This is not a default in single-player games because of their very nature: these game worlds are completely reliant on the player's continued interaction to exist, as without the player's decision to press play, the game would stay on the main menu. The player is interacting with a game world that is designed around facilitating only them, meaning that in order to make the world not feel reliant on their presence, creative or mechanical decisions need to be made that add decentralising elements to these single-player experiences. The potential results of these decentralising elements will be explored later in this paper, through close readings of single-player games containing such elements.

Current research around these terms in the context that this paper uses them is very sparse, although there is writing in related areas. For example, there has been much research into player-centric game design (Adams, 2006; Bostan, 2020; Charles et al., 2005). The concept of player-centric game design describes a design approach that "a game is to be played and looks at the key ingredients of making a game work for the player" (Kumar, Herger and Dam, 2023). The potential player is foregrounded when considering design decisions, in an effort to tailor the experience as accurately as possible to the target demographic.

This paper draws on player-centric design being a popular approach when examining potential reasons for player centralisation, but examines a different area to the research into player-centric design. The focus is instead on examining player centralisation and decentralisation as feelings that can be present within video games, as well as examining what results player decentralisation could lead to. That is to say that this paper is no way intended as a design guide or recommendation for a particular approach, and does not ascribe authorial intent to any instances of player decentralisation examined where it has not already been made known to be present (for example in the case of *Outer Wilds* (Mobius Digital, 2019).

Defining immersion

Immersion as a term in media has become “an excessively vague, all-inclusive concept” (McMahan, 2003, p.67), and as there are so many ways in which this word can be interpreted, it is important to discuss these different definitions and remove the ambiguity surrounding the word. In this section I examine the different meanings and interpretations of immersion and explore methods of evaluating and quantifying levels of immersion in media. I also delve into terms surrounding immersion that are also often used when examining interactive media, including “presence” and “flow”. These terms have also often been used “more or less interchangeably” (Nilsson, Nordahl and Serafin, 2016). To ensure that it is clear what I mean by each term when used in this writing, I will define each of them and explore where their definitions may intersect and blur with one another. I will also look at how these terms can be quantified when examining case studies, with the aim to then apply these criteria to the pieces of media I examine later on.

There are many ideas around immersion within interactive media that intersect with one another and have overlapping definitions. These theories around immersion are explored in “Immersion Revisited: A Review of Existing Definitions of Immersion and Their Relation to Different Theories of Presence” (Nilsson, Serafin and Nordahl, 2016), an article published in the journal *Human Technology.* When focusing on the existing definitions of immersion related to media, considering their origins from “the study of video games, virtual environments, and literary works of fiction” (Nilsson, Serafin and Nordahl, 2016, p.108) is important. Within this article, the authors present four different types of immersion that are often conflated: immersion as “a property of the system, a perceptual response, a response to the narratives, or a response to challenges” (Nilsson, Serafin and Nordahl, 2016, p.109). The article examines different definitions of immersion and suggests which of the four types these definitions fall into. The definitions examined within this article are ones previously put forward by other researchers (eg. Slater 2003; Adams and Rollings 2006; Ryan 2003).

Any discussion about immersion in interactive media must address the differences between system immersion, perceptual immersion and psychological immersion. System immersion (or “immersion as a property of the system used to present the virtual world” (Nilsson, Serafin and Nordahl, 2016, p.110)), refers to how much hardware is assisting in enveloping the user and is therefore quite easy to objectively measure. Perceptual immersion (or “immersion as a perceptual response to [the] system” (Nilsson, Serafin and Nordahl, p.110)), is a term used to describe how much “attentional surrender [is] caused by system immersion”, whereas psychological immersion (or “ immersion as a response to an unfolding narrative, the characters inhabiting the story world, or the depiction of the world itself” (Nilsson, Serafin and Nordahl, p.110)) refers to immersion caused by “captivating stories and spaces” (Nilsson, Serafin and Nordahl, 2016, p.110), and is the hardest of the listed types to quantify because the level of captivation in a story is difficult to measure objectively. The final type of immersion covered is “immersion as a response to challenges demanding the use of one’s intellect and skills” (Nilsson, Serafin and Nordahl, p.110). This is another type of psychological immersion, but is seen on a mechanical level rather than a narrative one. As will be covered more later, this type of immersion is also referred to as non-diegetic immersion, and has also been described as being in a state of flow. This distinction is important as the methods through which these different types of immersion are achieved are dramatically different, and it is therefore pertinent to define which are being discussed. When considering all of the types of immersion listed in this section, it is important to highlight that my writing will focus mainly on psychological immersion, and how this can be achieved through player decentralisation. None of the decentralisation techniques highlighted in this piece are achieved through hardware and they do not produce higher levels of quantifiable system immersion (that is, they do not envelope another of the user’s senses when employed), which makes evaluating the impact these techniques have on system immersion unnecessary.

More foundational definitions of immersion are examined within “Immersion, Engagement, and Presence: A Method for Analyzing 3-D Video Games” (McMahan, 2003), a chapter from the book *The Video Game Theory Reader* (Wolf and Perron, 2003). To define and use the term accurately, it is pertinent to “break down the concept of immersion into its more specific meanings and develop a

more specific terminology" (McMahan, 2003, p.67). One key claim that this writing makes is that there are three conditions that are instrumental in creating a sense of immersion in a virtual 3-D space. The first is that "the user's expectations of the game or environment match the environment's conventions fairly closely" (McMahan, 2003, pp.68-69). It is important to note that this does not mean the game world has to have conventions similar to the real world, but just that, as a general rule, the conventions of the world should respond to the user's interactions as they would expect (for example, if an object is pushed off an edge by a player, they would expect the object to fall to the ground). This idea of expectation from the player can be applied to long-standing conventions within games themselves. For example, in the real world, when we die, we don't expect to have the ability to respawn from a menu, and the inclusion of a respawn menu in a game unquestionably disrupts the flow of the experience. However, because this is such an established mechanism in games of many genres, the presence of a respawn screen is likely to have a lesser negative impact on the player's immersion than a game menu that is unexpected, because it has so often been seen and interacted with before. The next condition is that "the user's actions must have a non-trivial impact on the environment" (McMahan, 2003, p.69). To broaden the scope of this condition slightly, I will rephrase it to: the player's actions within the game world must have observable and non-trivial consequences. Limiting this rule to only the environment of the game, and not the player character or other characters, fails to acknowledge the impact on immersion that the ability to affect these other elements of the game can have. Examples of this rule in action include the player having the ability to literally dig out and build whatever they want in a game such as *Minecraft* (Mojang Studios, 2011). Another example is when the player's choice of dialogue has an observable effect on the outcome of an interaction, such as in *Fallout 4* (Bethesda, 2015), where players can change non-playable character's (NPC's) minds by deciding to say the correct thing to them, resulting in different outcomes (conflicts can be started or avoided through dialogue, or a player can enter into relationships with other characters through dialogue). The final condition listed by McMahan is that "the conventions of the world must be consistent, even if they don't match those of 'meatspace'" (p.69). Here, "meatspace" is used to refer to the real world, and this condition means that rules for the environment need to be applied consistently so that the player isn't pulled out of the experience. Further support for this idea is found in the concept of

“Game Credibility”, which states that “the player must first understand the atmosphere and environment of the game to then be able to believe it” (Rahimabad and Rezvani, 2020). It’s clear that in this writing the type of immersion being referenced is psychological rather than system immersion, as immersion is defined as being “caught up in the world of the game’s story” (McMahan, 2003, p.68). These conditions for immersion are useful when evaluating how effective a technique I examine is in increasing levels of immersion, and I will revisit these conditions later when looking at the case studies I have selected.

More contributory factors to immersion are explored in ‘Assessing the Experience of Immersion in Electronic Games’ (Bastos et al., 2017), where immersion is examined as a whole (perceptual immersion, psychological immersion and flow-state are all considered). This means that some of the factors explored are less relevant to this paper, as they are suggested to increase perceptual immersion, but there is one factor that links directly with psychological immersion (which the paper refers to as “imaginative immersion”). This factor is named “Implicit story and symbology” which states that players should not be spoon-fed information about the game, and suggests that the game “inspires curiosity and aggregates more to the experience” (Bastos et al., 2017).

An important aspect of immersion to mention is that it is not a binary concept. By this, I mean that not all of these conditions need to be present at once for immersion to be achieved. Immersion is “not a static experience” and describes “a scale of involvement with a game” (Brown and Cairns, 2004, p.1300), meaning that a game does not fail at immersing a player if some of these conditions are not met. Another point that should be mentioned before moving on is that “immersive” does not mean “better”. By this I mean that it is important not to equate immersion with quality when discussing interactive media, as this is often done in marketing for video games, with “immersive” being used vaguely to mean “good” or “enjoyable”. Overuse of immersion “has diminished its analytical value and confused its meaning, both in analysis and design” (Calleja, 2011).

Another important distinction to be acknowledged is the idea of immersion at the diegetic and non-diegetic level. This is the distinction between engagement with the in-universe elements of the

game such as the characters and narrative (the diegetic level), and engagement with the mechanics and challenge of trying to beat the game (the non-diegetic level). This distinction in illustrated in Salomoni, Prandi and Roccetti's investigation into the development of diegetic user interface (UI) elements within virtual reality experiences. Here, non-diegetic UI elements are identified as menus or pop-ups not included within the game world (these menus don't have a physical presence within the world). Diegetic UI elements are elements that are present in the game world, and can be "seen and heard by the game character" (Salomoni, Prandi and Roccetti, 2016). Diegetic immersion refers to the player being "caught up in the world of the game's story" (McMahan, 2003, p.68). A player who becomes immersed in a diegetic sense may have become engrossed in the narrative of the game they are playing, could have become particularly invested in the fate of one of the characters within the game, or could be engrossed in an emergent narrative that has sprung from engaging with the game environment. Non-diegetic immersion, however, is a type of immersion that is rarely found or alluded to outside of interactive media. This is because to be immersed at the non-diegetic level, the audience needs to be engaged on a mechanical or meta level with the media they are experiencing. An example of this could be a "player's love of the game and the strategy that goes into it" (McMahan, 2003, p.68). If a player is thinking hard about the solution to a puzzle game and becomes so engrossed in the task that they are immersed, this would be an instance of non-diegetic immersion. This is not to say that it would be impossible to find non-diegetic immersion outside of interactive media. For example, someone with particularly deep knowledge of how a type of media is created may become immersed on a non-diegetic level as they consider the methods that have been employed by the creator of the media to achieve various effects. Non-diegetic immersion is also often referred to as "flow", referring to the "flow-state" that a player can find themselves in when immersed in an experience on a mechanical level (Ellis, Voelkl and Morris, 1994).

Before continuing, I will highlight the differences between the mechanics and the narrative of a piece of interactive media. When discussing narrative, I am referring to the story that exists to give the player reason to engage with the experience, or the "skin" on top of the game that covers the mechanical level. When defining narrative representations, Marie-Laure Ryan writes that they

“[consist] of a world (setting) situated in time, populated by individuals (characters), who participate in actions and happenings (events, plot) and undergo change” (Ryan, 2001). Narrative elements are “located on the level of the signified” (Ryan, 2001), meaning they can be separated from medium.

When I mention mechanics, I am referring to the different ways in which the player can interact with the experience, or the “methods invoked by agents, designed for interaction with the game state” (Sicart, 2008); the aspect that adds challenge to interactive media. For example, a mechanic may be aiming and clicking with a mouse to shoot an enemy in a first-person shooter, while the narrative would be the added motivation for why the player character is doing this (you may be an American soldier in the Second World War and the enemy character could be a Nazi). Most of the focus of this research will be on immersion at the diegetic level, as I am examining how decentralisation can be used to make a game’s narrative and environment more immersive. I will acknowledge if I determine through the framework I use to analyse my case studies whether non-diegetic immersion is achieved instead. When researching these terms around immersion, it has become clear that the distinction between diegetic and non-diegetic immersion is an important separation to highlight as it means a distinction can be made between being immersed in the narrative of an experience and being immersed because of the mechanical challenge of an experience, which are two extremely different experiences that warrant different definitions.

The next term I will be defining is presence: “the artificial sense that a user has in a virtual environment that the environment is unmediated” (Lombard and Ditton, 1997). The current use of the term within media is derived from the term “telepresence” (McMahan, 2003, p.72), which gives insight as to what the term refers to. It is largely accepted that presence refers to the impression that you are somewhere that you are not, and is thus very closely linked to immersion, as an increased sense of immersion could intensify this impression. McMahan (2003) again provides a list of (this time six) factors that can increase a sense of presence. In this writing, I will mention the factors listed that are especially relevant to this research. The first is “quality of social interaction (McMahan, 2003, p.72)”. This paper does not limit this term to player-to-player interaction, and will

apply it to interaction with NPCs as well, as it is arguable that social realism will always increase a sense of presence, regardless of whether the characters being interacted with are controlled by players. The next factor is “realism in the environment” (McMahan, 2003, p.72). McMahan also mentions that “the degree of immersiveness [sic] generated by the interface” (McMahan, 2003, p.72) is another factor, a concept also covered in Silva’s investigation into how diegetic user interface elements can increase and experience’s immersive qualities (Silva, 2019). This is important to cover as it shows how each term can feed into the other; a sense of immersion can help create presence, and a strong sense of presence can help to immerse players. Another factor listed is “the user’s ability to accomplish significant actions within the environment and the social impact of what occurs in the environment” (McMahan, 2003, pp.72-73). This is similar to the condition of immersion that states that the user must be able to have a non-trivial impact on the environment and characters, which again displays the unavoidable link between presence and immersion. Many of these factors are further supported by Zahorik and Jenison’s description of presence as “tantamount to successfully supported action in the environment” (1998). In this definition, “successfully supported action” refers to the environment responding to interactions in a way which is perceived as “lawful” (or as the real world would be expected to react) by the interactant. Both “quality of social interaction” and “the ability to accomplish significant actions” are factors that fulfil this definition. The final factor this paper will cover states that presence can be derived “from the users responding to the computer itself as an intelligent, social agent” (McMahan, 2003, p.73), which again highlights the impact that social realism can have on the experience. These factors of presence will be referenced when discussing methods of decentralisation, as a greater level of presence will often lead to greater immersion in the experience for the audience.

Bolstering these ideas, Brown and Cairns explore various ideas and definitions for immersion in “A Grounded Investigation of Game Immersion”. This paper describes the work the researchers have done to “develop a grounded theory of immersion” (Brown and Cairns, 2004, p.1297). These ideas strengthen the already-established foundational definitions for immersion in the main two sources mentioned previously. It describes a series of interviews that the researchers conducted with gamers to examine what immersion means to them. While this study gives insight into commonly

held ideas about immersion, it also relies more on these interviews than other academic research when discussing these concepts, which is why it is more suited for supporting other sources than being a major foundational source.

It is also worth considering what the different types of psychological immersion may be, along with how these types of immersion can be achieved. Chapter four of *Narrative as Virtual Reality 2* (Ryan, 2015), titled "Varieties of Immersion: Spatial, Temporal, Emotional", explores these ideas, focusing on breaking down the term "immersion" into more clearly defined and specific terms that can more accurately describe the type of immersion that is being achieved. Ryan delves into the different ways in which psychological immersion can be achieved and explores different types. The first type of immersion introduced is spatial immersion, which occurs when a piece of media creates a connection between an audience and an evoked place. This writing proposes that written works are particularly unsuited to spatial immersion when compared to visual media, as the format only allows for a description of a location through words, rather than having the ability to use the full frame to show a space to the audience. When discussing how an author may seek to immerse a reader in a space, one method discussed is to approach the description of the space in a "systematic manner" (Ryan, 2015). This means approaching the space as a person actually navigating it would, by describing each room or area as they would appear to someone walking through it. This is in contrast when compared to interactive media's ability to spatially immerse players, as the space can be presented as a traversable environment for audiences to explore and become immersed in at their own pace. A particular author cited in this work is novelist Honoré de Balzac, an author who prioritised the establishing of a place, and therefore spatial immersion, very highly when telling a story, and would describe the setting "all at once, at the beginning of every novel" (Ryan, 2015). This description and establishment of a place is still prioritised in interactive media, though it is achieved largely through the creation and modelling of the navigable environment for the player rather than meticulous textual description of a place. Another large difference between interactive and traditional media when considering spatial immersion is the amount of imaginative legwork the audience is expected to do to become spatially immersed. Ryan discusses how readers are expected to conjure images and ideas of places described through text,

often relying on the use of “proper names” to evoke particular imagery. Much of interactive media completely avoids this obstacle by presenting the space directly to the player, with no need for semantic description to translate what the creator wants the audience to picture. This highlights how well-suited interactive media are to spatial immersion, which in turn demonstrates the relevance of research into methods for immersing players in a game world.

The sheer number of sources being used solely to introduce and define what is meant by “immersion” and its surrounding terms demonstrates how many different ways this term can be used and interpreted. It is useful to unpack these interpretations and definitions to have a more fleshed-out understanding of what is meant when these terms are used. Based on this literature survey, psychological immersion is isolated as the specific type of immersion pointed to in this writing when the term “immersion” is used, and as the main type of immersion being searched for through decentralisation. It is also pertinent to explore and understand other elements of interactive media (and media in general) before introducing the paper’s own ideas around methods of decentralisation, such as world-building, and the concept of suspending one’s disbelief. World-building is important to consider as my writing examines game worlds in particular, and suspension of disbelief plays a large role in immersion.

World-building in interactive media and suspension of disbelief

There is very little research directly into the technique this paper labels “decentralisation”, wherein the player is made to feel as though the game world isn’t created specifically for them. However, there is research into the general technique of world-building for interactive media and how worlds can be made immersive. One popular piece of writing in this area is *Game Design as Narrative Architecture* (Jenkins, 2003). This piece sets out some pertinent ideas for how interactive media can be used to tell stories, highlighting issues such as the tension between a compelling, well-paced narrative and allowing the player agency and freedom to explore at their own pace. A key element of games that Jenkins highlights in this piece is how suited they are to presenting compelling spaces, writing that “games, in turn, may more fully realize the spatiality of these stories, giving a much more immersive and compelling representation of their narrative worlds”

(Jenkins, 2003). This suggests that games may rely more heavily on the creation of immersive worlds when attempting to tell an effective story. This in turn highlights the importance of any techniques that can enhance the immersive qualities of an interactive experience. Interactive media is especially suited to spatial storytelling, as an audience can be presented with a navigable, seemingly complete space they can work through at their own pace. There is some truth to the idea of there being a tension between a well-paced story and player agency, although this is often due to an overly-rigid idea of what a story's structure should be, and can arise from trying to translate a traditional story structure that can be applied to cinema or literature directly to interactive media, an issue that Markku Eskelien highlights and examines in *Cybertext Poetics* (2012).

There are many other ideas surrounding how interactive media can create immersive worlds and experiences, and such ideas are explored within the book *Hamlet on the Holodeck* (Murray, 2017): another influential piece of research that explores the different methods through which interactive media tell effective stories and immerse players. One vital aspect of immersion in media is the idea of "suspension of disbelief", which refers to the audience becoming invested in the story's events by, on some level, believing that the events are unfolding in front of them. Exploring this idea, Murray suggests that the term "suspension" is inadequate to describe what is occurring when we are immersed in a story, and that we are actually "exercis[ing] a creative faculty" and actively creating belief when we allow ourselves to be pulled into narratives, using "our intelligence to reinforce rather than to question the reality of the experience" (Murray, 2017, p.110). This idea is also explored by Lukka when discussing psychological immersion, who writes that "the player is constantly ignoring elements that could break the immersion" (Lukka, p.86). This shows how closely linked the concepts of suspension of disbelief and immersion are.

Eva Schaper further explores this in her article "Fiction and the Suspension of Disbelief" (1978), which examines the tension between our minds knowing that what we're experiencing is fictitious and the need for stakes to be present in order for us to become invested and engaged with the story being told. This is interesting when viewed through the lens of interactive media, as so much stock is often put into the idea of system immersion, and the need for as many of the player's

senses as possible to be enveloped by technology in order to achieve total immersion. However, the idea that audiences and players don't need to be tricked by media into thinking that it's real in order for suspension of disbelief to occur contradicts the theory that system immersion and advanced technology is a prerequisite of full immersion. This emphasises the importance of separating the concepts of psychological immersion and system immersion, making it clear that the concept of full immersion means something different in the context of the former than it would in the context of the latter. It also highlights psychological and narrative immersion as being incredibly important aspects of storytelling within interactive media. This in turn further justifies this project's exploration into psychological immersion and in particular the impact that decentralising the player could have upon it.

Linking decentralisation and immersion

Importantly, not all types of interactive media by default centralise the player character. This paper suggests that examples of player centralisation are mostly seen within games with more traditional narrative structures that are attempting to tell stories in ways similar to traditional media, such as books and films. This will often involve a story split into acts with main and secondary characters that are used to invest the player and advance the plot. There are countless examples of interactive media that don't centralise the player character in a narrative sense, such as *Dear Esther* (The Chinese Room, 2012), which places the player as a spectator of the story, exploring an island whilst slowly learning more about the narrator character and his wife's death. While it is hard to argue that the player is centralised from a narrative standpoint, there is a case to be made for the player being centralised within the game world mechanically. Throughout the experience, the player is the only character seen on this island, and by just walking around they are greeted with story elements in the form of narration and narratively significant locations that shed light on various events. By presenting the story in this way, I would argue that the player is being mechanically centralised, as the world's sole purpose seems to be to deliver exposition to the player character.

Dear Esther is an example of a video game that does not meet the case study criteria for this research, as it does not provide the protagonist with explicit and sustained agency or influence within the game world. My focus will instead be on media that involves the player character directly in the story as it unfolds, such as having the player play a detective tasked with solving a murder, or an astronaut set on exploring the solar system. These are games that come with an expectation of centralisation, which has been created through how past pieces of interactive media have handled the delivery of such narratives. These game worlds have been created with the primary goal of facilitating interaction with the player and providing them with any narrative or gameplay information that is necessary for the player to understand. This is also true of NPCs whose main function is to be seen by the player character and either deliver exposition or gameplay information (if NPCs were never seen by the player, they simply would never have been created or included in the experience).

This is where techniques of decentralisation can and have been used to great effect. By employing techniques that create the impression of a game world that is not reliant on the player's interaction to exist, the inherent artificiality of a game's environment and characters can be masked, allowing for an easier suspension of disbelief to occur. For suspension of disbelief to begin, a level of co-operation is required from the audience. If a player goes into a game determined to pick holes in its logic and notice every element that highlights its artificiality, immersion can never be achieved. This paper argues that the techniques of decentralisation covered in this writing can help to produce voluntary suspension of disbelief and allow for deep engagement with the narrative, which could result in a greater degree of diegetic immersion.

It is important to acknowledge that, for this writing, noting the presence of decentralisation alone is not the end goal. The focus of this piece is on how decentralisation affects the levels of immersion of a video game. It can be argued that decentralisation may result in a player, through an impression of their own insignificance, feeling as though they don't have much sway on events and therefore becoming less immersed in the experience. "Decentralisation" does not necessarily mean depriving the player of agency within the game world. The term instead refers to the impression

that a game world is not reliant on the player character's presence to exist. That does not necessarily mean that the player has to feel powerless or insignificant within the environment (during *Outer Wilds* (Mobius Digital, 2018) for example, which this paper identifies as having decentralising elements, the player character ends with the power to affect great change on the game's universe), but that the game world and its various elements feel as though they are present beyond the scope of the player character, and are not reliant on their interaction for existence. This can assist in allowing suspension of disbelief. When discussing suspension of disbelief, Woltmann writes that "[the] onus of suspended disbelief lies with those involved in the creation of a fictional work; only then can the audience take up their part of the bargain" (2023). Therefore, to ease an audience into suspending their disbelief, barriers that serve as reminders of the artificiality of the experience being engaged with should be removed. An example of easing suspension of disbelief in media is found in the clear establishing and following of the rules of the narrative world that is presented (Woltmann, 2023). When an audience understands the rules of the world they are engaging with, even when these rules are not the same as the real world, it is much easier for them to suspend their disbelief and become immersed in a fantasy world when it adheres to these rules consistently. This paper proposes that in the cases highlighted below, player decentralisation serves as another method for clearing a barrier to suspension of disbelief; removing reminders that the player is at the centre of an artificial experience that has been created for them, and creating the sense of a genuine environment, not solely reliant on the player's interaction for its existence. Immersion as a term is widely used in the gaming space, and is understood to be "critical to game enjoyment, immersion being the outcome of a good gaming experience" (Jennet et al., 2008), and is arguably even more important when a game is presenting the player with a world, characters and narrative to engage with. This shows immersion's importance as a goal for video games. A game's primary concern will not always be narrative engagement, but will often be on mechanical immersion instead; this is still a level of immersion that is being targeted, although this non-diegetic immersion is not reliant on any suspension of disbelief from the audience. All the audience needs for non-diegetic immersion is to be mechanically engaged with the game they are interacting with, rather than a level of investment into the fictional world being explored.

An important point to note in this section is that allowing for easier suspension of disbelief is one way to facilitate immersion, but it is not the only way, as is evident through the breadth of research into immersion and its causes. A large focus of this paper is on how various decentralisation techniques aid in allowing for easier suspension of disbelief from the audience. However, it is pertinent to acknowledge that this paper is not claiming that this is the only way immersion can be achieved, or that a fictional world must be similar to the real world in order to be considered immersive. Rather, the claim being made is that easier suspension of disbelief is one source of increased immersion, and that the decentralisation techniques covered in this paper take advantage of that.

3: Methodology

Now that I have made clear the primary goal for my research and clearly defined key terms, I can explain how I will go about answering my research questions: “What decentralisation techniques are found in contemporary single-player video games, and what do these techniques achieve?”

I will be approaching this research through close readings of chosen video games in order to identify methods of decentralisation and explore what effects they have. In order to answer the question and analyse the effects of decentralisation, I will examine what effects these techniques have on immersion by comparing what the decentralisation techniques achieve with the various criteria for immersion that have been identified in the previous chapter.

I have performed at least one close reading on each case study (I had also already played through all of the games before beginning the reading process). My initial close readings were performed in the style of “The Imagined Naïve Reader” (Bizzocchi and Tanenbaum, 2011), which refers to playing through a game while inhabiting the mindset of a player who knows nothing about the game they are playing or its genre. This means that I will perform a play-through of the game while trying to “oscillate” between the two states of enacting “the play of a naïve gameplayer” and keeping “distance from the experience” to effectively catalogue and analyse examples of decentralisation throughout the experience. This method of close reading is useful as it gives an idea of how a game is experienced upon a first play-through (which is how the majority of players will experience the game), which in turn will provide insight into what effects the techniques the case studies employ may have. Being able to oscillate between states is still important, as maintaining a level of analytical thinking will assist in the identification of various creative and mechanical techniques that result in decentralisation.

At various points throughout this research, it has proved necessary to perform multiple close readings of a case study in order to effectively analyse the various techniques employed by the developers. For example, this was important in chapter four on genre mechanic subversion. In

order to effectively analyse how a game has subverted its own genre, further close readings were required with “A Performed Player Stereotype” (Bizzocchi and Tanenbaum, 2011) in mind. This refers to the enacting of a player that is used to certain genres. When close reading *Battlefield 1* (Dice, 2016) for this chapter, I enacted a first-person shooter (FPS) gamer whilst playing to gain insight into how the action FPS genre was being subverted through designer decisions. Similarly, when playing through *Disco Elysium* (ZA/UM, 2019), I found it valuable to embody a gamer very familiar with both video and tabletop role-playing games in order to understand in what way subversion is occurring, as there are various elements within the game indicating that it was designed for this audience (such as extensive story elements and character interaction along with dice roll skill checks for obstacles to the player character).

In different instances, “Focusing Readings with Analytical Lenses” (Bizzocchi and Tanenbaum, 2011) proved very valuable. For example, during my social realism chapter, I found it necessary to perform close readings of the included case studies where I would be mainly focused on how the non-player characters were interacting with the player character. This then allowed me to take insights from this analysis and examine how techniques related to social realism were affecting these interactions.

Selection of the case studies was led by the following criteria:

One: the experience is primarily single-player. The reason for this lies in the necessity for the decentralising effect to be one that is created through choices by the developer, rather than one that is already present because of the genre. Within a multiplayer setting, by default the player character is not the centre of the experience, as there are other players required for the experience to exist, to whom the game also needs to cater. In contrast, a single-player game relies solely on one player to interact with the experience, and it can be argued that without this interaction, the experience does not exist at all. This means that, for a player to feel as though they are not the centre of the experience, some technique has to be actively employed, rather than the nature of the game itself being the reason for this effect being present. This idea of “active decentralisation”

played a large part in my case study selection process. Even if the developers were not explicitly aiming to create a decentralising effect through the employment of these techniques, the decisions need to be actively made that change the nature of an experience that would otherwise overtly centralise the player. This does not ascribe authorial intent to decentralise, but instead focuses on the idea that these techniques need to be actively employed to result in a decentralising effect, in contrast to a game that decentralises through its genre. It is not being suggested that these techniques were deliberately implemented with the goal of decentralisation in mind, but that these techniques were actively employed, and that through their inclusion, a sense of decentralisation is created. Importantly, this condition does not mean that a case study has to be *solely* single-player, but that the section of the experience that I highlight will be.

Two: the piece of interactive media should be a video game with traditional game genre elements. By this, I'm referring to games that fall into established genres such as action first-person-shooter (action FPS), role-playing game (RPG) or open-world survival. All of these genres include clear goals illustrated through their mechanics and elements of challenge for the player to overcome. They are also often (although not always) built upon traditional story structures that can be seen in traditional media. This is in contrast to more experimental interactive media that may not contain a clear challenge or clear goals, and that also may tell a more abstract story that's harder for an audience to parse. I will refer to this distinction between the "active decentralisation" versus "decentralisation by genre". Similar to my points surrounding multiplayer experiences, if an interactive experience is decentralised by genre, it will not be useful to examine it within this writing, as the focus is on techniques that these works have employed that result in decentralisation, not just the presence of decentralisation. The reason for this decision is that video games with traditional genre elements will often by default centralise the player both narratively and mechanically. This writing examines techniques that can be employed to decentralise the player in a game world, meaning that only interactive media that would normally centralise the audience is suitable for focus.

Three: the worlds and environments that these experiences present are “diegetic worlds”. By this, I mean that the worlds are created with the purpose of narrative immersion in mind, as opposed to a world that is more focused on facilitation of gameplay and a “flow state” from the player. These “non-diegetic worlds” can be seen in games that foreground gameplay elements over story, such as *Mirror’s Edge* (Dice, 2008) and *Neon White* (Angel Matrix, 2022). Both of these games have had massive success with the speedrunning community (Ramée, 2021; Wagar, 2020; Good, 2017), with much more focus being placed upon level layout and clarity than storytelling. While these games aren’t purely non-diegetic, their worlds have been designed to foreground gameplay and mechanics over narrative, being designed with the idea of “directing us to the possibility of interacting with them” (Jones, 2023, p.202). While there may still be a story present (the game could still have a “skin” of narrative to add interest), there will be a noticeable focus on efficiently delivering gameplay to the player (cut-scenes may be few and far between, or absent completely, and downtime between moments of action will be minimised). Games like these can still immerse players, but it will be a non-diegetic immersion, where the player is lost in flow rather than invested in the narrative.

Four: The game contains NPCs that acknowledge the player character. By having NPCs respond and react to the player character’s actions, the developers are establishing the player within the world as a character with agency and one that affects the story being told. This distinction is important as it is indicative of whether or not an experience is by default centralising the player character in the game world. I will use *Dear Esther* as an example of this condition not being met. While this is a single-player experience and contains a narrative and diegetic world for the player to interact with, there are no NPCs to be found within the environment that acknowledge the player character’s presence. The player character is established as a spectator or observer rather than a participant in the events of the narrative. As “Dear Esther asks nothing of you but to occupy [its] world” (MacDonald, 2012), this likens playing through it to experiencing more traditional media such as books or film, as the audience are explicitly situated as spectators to events that are occurring or have occurred. This is in contrast to games that clearly establish the player character as an active participant in the game world that affects the narrative. These types of experiences are

more likely to centralise the player by default, as the audience is playing as a character that is acknowledged by and has apparent influence on the world and characters around them. This is why I have highlighted the acknowledgement of the player character by NPCs as a condition for a game to be focused on within this writing.

Five: there should be a popular audience/critic consensus that the game is immersive. As immersion plays a large role in the answering of my research question, it was necessary that any game that I focused was already widely considered as immersive, so that the focus of the writing could be on any decentralising techniques that are present within the media and how it may affect the levels of immersion that are already widely accepted to be present. With this in mind, all of the games examined in this writing have been hailed as immersive titles in their genre by popular publications. As different case studies are introduced, a small section will be included going over various sources that have described the media as immersive.

To delve more into this criteria and the thinking behind it, it is important to acknowledge that the method of selection employed in this research cuts out a large portion of video games. This paper operates with a broad definition of the term “video game” which is well represented by Esposito, who defines a video game as “a *game* which we *play* thanks to an *audiovisual apparatus* and which can be based on a *story*” (Esposito, 2005). The selection criteria excludes a wide portion of games that fall under this definition; namely more experimental games that may not slot into a traditional genre description or have clear narratives and NPCs. The term player decentralisation may be applicable to many of these experiences, as all the term describes is the impression that the player character is not an essential factor of the game world they are operating within.

The decisions behind the selection criteria came from a desire to focus on games that, without the inclusion of specific narrative or mechanical elements (or “decentralising techniques”, as this paper labels them), would centralise the player. This has not been done to try to limit the use of the term “decentralisation” to games that fit within the selection criteria, but rather to select games that,

because of their genre and various other elements, would “centralise by default”, with the goal being to highlight the techniques that push in the other direction, towards decentralisation.

It is also important to highlight that this paper’s scope only extends as far as my own close readings investigating the various examples of player decentralisation that I have identified. This is relevant to keep in mind when reading this paper, as there are points where the potential “effects” of the decentralising techniques are discussed. When discussing effects in this paper, it is only my own impressions from close readings paired with my wider reading around the topics of immersion, world-building and game design that are informing the conclusions being drawn, rather than a wider study involving feedback from participants.

4: Genre mechanic subversion

Defining genre mechanic subversion

One technique that can create a decentralising effect within the game world is when a game's genre tropes are subverted, either mechanically or narratively. Long-established game genres, like genres in any other media, have extensive lists of identifiers and tropes specific to them that make it easy to sort them into their various categories. Different categories have been identified and created that all hold their own "playing contract" (Căşvean, 2016), which help communicate to the audiences considering the game for purchase what will be in store for them when they press play. In this section, I argue that subverting some of these game mechanics can serve to catch a player off-guard and, by placing them outside of their comfort zone, also create a decentralising effect.

Battlefield 1: inevitable failure

An example of this technique being used is seen in an opening mission for *Battlefield 1* (Dice, 2016), a military shooter centred around the First World War that has been praised for its levels of immersion in reviews (Patskan, 2016; Moldrich, 2016). This mission opens with a black screen accompanied by text that reads: "What follows is frontline combat. You are not expected to survive." The player is then thrown into the midst of combat as a soldier on the frontline, where you are expected to fight for your life. Already, this could be seen as somewhat decentralising, as the game gives no narrative introduction or motivation for the battle that is currently occurring. By starting the mission in the middle of conflict, the impression is created that the environment being interacted with and traversed was present before the play button was pressed, and will continue to exist after the game is exited.

The main focus for this example, however, is on how the game handles death and failure states for this particular mission. The "You Died" screen and respawn button are a mainstay of the military shooter genre, with the usual structure of a level involving the player attempting to complete a level and respawning upon each death, until eventually succeeding. *Battlefield 1,* for this mission at

least, dispenses with this convention, making the player character's death permanent and unfixable. Upon death, rather than a "Game Over" screen, the game displays the recently deceased player character's name, along with their birth and death year. The game camera then zooms away from the current player character, floating across the battlefield and showing the violence occurring all around the environment. After a few seconds of this, the camera focuses in on another soldier in another combat situation, and zooms into their first-person perspective, once again granting the player control and the ability to fight for their character's life. All attempts at survival will prove futile, as the level continues across a massive battlefield from soldier to soldier, with each character to which the game affords control dying shortly after this control begins. While the player is still in effect respawning, their previous player character is not, which is in direct contrast to how the levels of these games normally function. The player character would usually be an indispensable element of the game world; if the player character dies, the whole experience pauses and will reset to let them retry the level.

This mechanic of certain death is seen very rarely military shooters, with the purpose of many games of this type to provide a power fantasy and dispense propaganda on behalf of the military-entertainment complex (Duffy, 2021). By subverting the expected mechanics of this game genre, this level provides a jarring experience, which in turn serves to highlight how unimportant the characters being played are to the game's world. If this was all in line with a seasoned first-person military shooter player's expectation for how they would play through this mission, the impact and level of decentralisation achieved may be lessened, as once something becomes a recognisable trope or motif of a genre, the artificiality of said mechanic or narrative element is more identifiable. This is why it is important to highlight these techniques as subversions of the genre, as without the unexpected nature of this mechanic its inclusion may not be as impactful.

There have been discussions around the efficacy of this opening mission, with some suggesting that the desired impact of the mission was lessened through certain choices regarding the gameplay within the level (Clement, 2018). This idea is focused on by narrative designer and writer Tom Clement in his blog post *Why Battlefield 1's 'You are not expected to survive' Does not Work*

(2018). Here, Clement targets the inevitable nature of death within the mission as the failing point of the experience. It is argued that the "expectation of death … made [him] feel a little defeatist. What was the point of playing if [he] was just going to die anyway?' (Clement, 2018). This is an interesting perspective on the level, and I believe there is some truth in the problem that Clement identifies: namely that there is a lessened impact through the player being *told* that their fighting will prove futile. However, the solution offered within this article is, I feel, one that would only prove to further lessen the impact of *Battlefield 1's* opening. Clement suggests incorporating the actual death statistics from the First World War, and ensuring that the player character only dies in two-thirds of the encounters. Another suggested change would be that of the opening text of the mission, altering it to read: "What follows is frontline combat. Two out of every three soldiers in WWI died." This solution misses what makes the experience of playing this opening mission so impactful: the decentralisation that is achieved through certain failure within a genre where that mechanic is so rare. It is this partial subversion of the military shooter genre that sets *Battlefield 1's* opening level apart from other missions; the fact that there isn't a chance of success is the very element that creates the impression of the massive, hostile world that the game presents. Introducing a chance of success into the experience serves only to bring the mechanics of the level more in line with that of most other military FPS games, lessening the degree of subversion achieved within the level and the impact of it as a whole.

The "Game Over" screen is certainly not exclusive to military shooter games either, with the fail-state screen being a mainstay of most game genres, from platformers to immersive sims. Players have been conditioned over time to expect another try at the experience after failure, a practice that was present even in arcade game cabinets or "coin-ops", where extra lives and second chances were auctioned off for tokens or coins (Lendino, p.16). This is an example of a game's user interface (UI) centralising the player, as the "Game Over" or "Retry" screen is an explicit acknowledgement of the player and gives them the opportunity to essentially rewind the time of the game world to offer their character another chance to succeed. By allowing this, the game is communicating that the player character is an extremely important element of the world being interacted with - so important, in fact, that the whole world will reset its state for their convenience.

This fail-state screen is so ubiquitous in video games that it is a notable decision when a game or level does not contain one. This paper argues that when a player is denied an opportunity at a second chance and is instead forced to watch as the game world continues past the life of their character, this asserts that the game world holds more importance than the player character and creates the impression of a world with a wider scope than just what is shown.

Disco Elysium: subversion through player agency

Disco Elysium (DE) (ZA/UM, 2019) is another game that subverts the usual mechanics of its genre, resulting in the effect of decentralisation within the game world. *DE* is a dialogue-focused role-playing game (RPG) which incorporates elements from pen and paper RPGs such as *Dungeons & Dragons (D&D)* (Wizards of the Coast, 1974). It has been cited by multiple game journalists as being among the "most immersive RPGs" (Chettiyar, 2022; Pence, 2022). The game is largely text- and dialogue-based, with progress being made through the player character, a detective, having conversations with various NPCs and slowly gleaning information relevant to the case he has been tasked with solving. Any meaningful actions outside of conversation are decided by the roll of two six-sided die, similar to the way *D&D* handles skill checks and combat damage for players. Because of these mechanical similarities, *DE* sets itself up as reminiscent of tabletop RPGs, with one of the mainstays of the genre being a level of extreme agency being afforded to the player. When playing *D&D,* this is achieved through the presence of a Dungeon Master, who is given the job of facilitating the other players' interaction and allowing them to veer off of what may have been the predetermined narrative path. This results in the game often affording incredible amounts of freedom and agency to affect and shape its world, with there being almost no limit on the variety of actions that can be performed. While pen and paper RPGs are aided in their flexibility through their medium (as the game sessions are driven by the players' imaginations rather than game code), other pen and paper RPG-inspired games such as *Baldur's Gate 3* (Larian Studios, 2023) have been seen to offer incredible variety in the ways through which the player characters can affect the world around them. When discussing *Baldur's Gate 3,* Brazie writes that the game consider[s] and respect[s] all of the reasonable (and many unreasonable) actions the players might take within the game" (2023). *Disco Elysium* subverts this element of the genre by offering a different kind of

agency that has much more power to shape the player character, but gives much less sway on the wider world around the character than may be expected.

A central mechanic of RPGs is character progression: allowing the player to level up various attributes of their character and shape them over time to be specialised in certain areas. *DE* is no different in this sense, allowing players to spend skill points to increase certain attributes for the player's character. One large element of *DE's* character progression system is the "thought cabinet". Players can invest skill points into either internalising a new thought or forgetting an already-internalised one rather than increasing a character attribute. These thoughts can vary widely, ranging from the idea that the player character is a long-forgotten disco superstar to the theories of Marxism, radical centrism, or extreme capitalism (which can all be internalised at once). This affords an extreme amount of agency when it comes to the player character's personality and internal decision-making. The aspect of this that subverts the tabletop RPG genre is the lack of agency that is afforded in terms of affecting events occurring in the world being interacted with. *Disco Elysium* presents an environment that is explorable and rich in detail, although player actions don't change many of the large narrative events that occur throughout the experience. The player character is positioned more as an observer and examiner of events rather than a key factor that affects how events unfold. This is in juxtaposition to the classic way that tabletop RPGs handle player interaction with the world around them, with players usually being afforded extreme agency in both how their characters are represented and the ways in which their characters can alter the world around them and the narrative structure of the experience. If a player is familiar with the game genre before going into *DE*, their expectations will be subverted as they discover their agency is channelled much more into their character's internal dialogue than the player character's overall impact on their surroundings. This in turn creates a sense of decentralisation, as the game world may be expected to bend and flex more with player decisions, as it would in a game of *D&D*, thanks to the dungeon master managing the experience.

A significant aspect of this subversion within *DE* is the politics of the decision to place the player in the shoes of a police officer while not affording them the agency they might expect to affect or

improve the world around them. While it is not within the scope of this paper to thoroughly explore the politics of decentralisation, it is an important aspect to acknowledge. *DE's* handling of a lack of agency is not similar to games with more on-rails experiences, such as action shooters, as the player is still given an incredible amount of choice. Instead of choice being shown through the world changing, they are directed inward and seen within the player character's thoughts. The choice offered here is still important, evident when made and valuable, but is focused on a different area than may be expected for those familiar with *DE's* genre.

Conclusions

While this section does not by any means cover all of the ways in which a game's genre could be subverted in order to create a decentralising effect, it has introduced the idea and demonstrated how it has been implemented before, showing two very different examples of the technique in action. Both of these serve to establish the impression of the player character having a participatory rather than a central role within the game world. In *Battlefield 1's* opening mission, this is shown through the playable characters not being given the same "hero treatment" that we see afforded to protagonists in so many other military shooters. Through this subversion of the genre, the game communicates that, within this specific mission, the game world does not revolve around any single one of the playable characters, which in turn creates the impression of a world that exists beyond what is shown. *Disco Elysium's* genre is very different from *Battlefield 1*, and its method of subversion is similarly distinct. By directing the avenues of player agency inward and allowing the greatest impact to be on the player character's own thoughts and feelings rather than on the game world and other characters, *DE* curates an environment that seems indifferent to the player character while ensuring that there are still aspects of agency within the experience.

I argue that both of these techniques increase immersion by removing barriers to the suspension of disbelief. By establishing the conventions of the game world as closer to that of our real world than most of the game worlds within their respective genres, the developers of these two games have made it easier for suspension of disbelief, and therefore immersion to occur. *Battlefield 1's* introductory mission does this by not affording any of the playable characters any special treatment

or second chances. This removes one of the largest barriers to suspension of disbelief within military shooters: the player character's seeming guaranteed success (thanks to the ability to retry). *Disco Elysium* also removes a barrier to suspension of disbelief seen in many role-playing games: the playable characters being afforded extreme levels of agency in terms of affecting the environment surrounding them. By affording extreme inward agency but offering little choice when it comes to dramatically altering the surrounding environment, *DE* brings the game's conventions closer to those of our own world (where most of us have much less agency on our outer world than we do on our inner selves), and by doing so removes a barrier to suspension of disbelief, allowing for fuller immersion. It is important to acknowledge that the ability for the playable character to have great effect on the world around them in a *D&D*-style game is often argued as an element that brings great immersion. The purpose of this section is not to discount or debunk the immersion that may be caused by such systems, but instead to highlight the possibility of how subverting these systems could also lead to an immersive experience.

Not every subversion of genre will increase the immersive qualities of an experience. This section has in particular focused on examples of genre mechanic subversion that aid in bringing the experience of the game world closer to that of our real world by subverting mechanics that overtly centralise the player character. It is this paper's argument that by subverting these mechanics, some of the normal reminders to players that they are playing through an artificial experience are removed, and suspension of disbelief is made easier.

5: Social realism

Defining social realism

How can other characters within the game be used to create a decentralising effect? This is where the technique of social realism can be employed. The term social realism refers to how true to the non-mediated world a piece of media is in terms of character interactions, as opposed to perceptual realism, which refers to how realistic the environment presented to audiences looks and sounds (McMahan, 2003). It is important to highlight that social realism is also a term used to describe work created by artists that highlights the socio-political conditions of the working class and critiques the systems that have caused these conditions, although this is not what I am referring to in this writing when I use the term. Both social and perceptual realism are important factors of presence, although perceptual realism is linked much more to the technology being used to build a game; how visually realistic it can be made to be, or how accurate the sounds the player is hearing are to the environment. Social realism, rather than being decided by technological complexity, is largely dictated by storytelling and narrative decisions. It can have a huge impact on decentralisation within a single-player experience, as it is a vital factor in allowing the player to suspend their disbelief around NPCs, and making the NPCs seem like independent agents interacting with the world that haven't been placed there solely for the player's benefit.

Disco Elysium: social realism in dialogue

One example of social realism being utilised to achieve decentralisation is seen in the use of "assumed knowledge" in interactive media. Examples of this can be seen in *Disco Elysium*. Here, the player plays as a detective tasked with solving a murder while afflicted with amnesia, meaning that the player character can't remember anything about themselves, their surroundings or what their goals are. This aligns the naïve player's knowledge with that of the player character very effectively without breaking any immersion, as there is an in-story reason for why you don't know things that you should. However, when the player character is interacting with others on his investigation, there is always an assumed base knowledge on their part within conversations,

despite both the naïve player and player character not knowing anything about the history or geography of the in which world they are operating. Additional context or information needs to be requested specifically by the player character, and will often garner surprised or concerned reactions from other characters when they discover your limited knowledge.

By setting up the narrative and mechanics in this way, the impression is created of a game world that, through its levels of social realism, seems not to be reliant on the player character to exist, as there is an evident wealth of history to the area that isn't spoon-fed through character interactions. This information needs to be explicitly requested from characters, meaning that work has to be done to understand fully the world that the game presents. This is how one would expect to have to gain this sort of information in the real world, and therefore increases the level of social realism within the game, making the experience more believable and therefore immersive. These interactions create a decentralising effect, as the NPCs are not specifically catering to the player character, who is instead positioned as just another entity operating within an already-existing world.

It is not just through assumed knowledge that *DE* injects high levels of social realism into its content. Social realism can also be added through NPCs' reactions to and acknowledgement of the absurd. The nature of *DE* allows the player character to respond to other characters in a variety of ways, some more absurd and nonsensical than others. In order for social realism to be maintained, these absurd responses need to garner appropriate reactions from NPCs. By having NPCs be surprised or taken aback by what the player character says, the developers are ensuring that the interaction between the player character and NPCs stays somewhat true to how a similar interaction would play out in real life, and therefore are keeping the interactions socially realistic, which in turn masks the artificiality of the conversation taking place. When referencing back to McMahan's (2003) conditions for immersion and presence, it can be seen why social realism could assist in increasing the level of diegetic immersion of a game. One of these conditions is that "the user's actions must have a non-trivial impact on the environment" (p.69), which I altered slightly to be that the player's actions within the game world must have observable and non-trivial

consequences. When considering how the maintaining of social realism allows the player character to have observable effects on the NPCs around them (such as other characters being shocked and concerned by the player character's seeming lack of knowledge of the game world), it is clear that this condition is met by *DE's* maintenance of social realism.

God of War: when social realism is lacking

Popular video games that occupy long-standing genres will often clearly deliver the information that is needed to progress through the experience to the player. This can be effective when used in appropriate contexts to maintain the flow of the experience. Flow (or non-diegetic immersion) is the "merging of action and awareness" (Nilsson, Nordahl and Serafin, 2016, p.116), and occurs when the player maintains intense focus on a challenge for a prolonged period of time, becoming immersed on a mechanical level in the experience rather than on a narrative level. To facilitate flow, games may have to nudge players in the correct direction at times so as to not break momentum and ensure their enjoyment of the experience. Unless implemented seamlessly, however, these hints can detract from social realism and expose the artificiality of the environment that is being interacted with, resulting in a reduction of diegetic immersion. For example, if the player character is constantly being prompted about where to go next by an NPC, this could potentially facilitate flow, because a hint will help maintain momentum and immersion on the non-diegetic level, maintaining focus on the mechanical challenges that the game is presenting. However, this form of hinting also has the potential to detract from the social realism of the experience, as this device highlights the NPC as having the function of assisting the player, rather than providing the illusion of the NPC being an independent entity (which would, by extension, have a decentralising effect). We can look back at Bastos et al. (2017) when considering how this may affect immersion, as this concept directly contradicts the "implicit story and symbology" factor of immersion (which states that players should not be spoon-fed information about the game).

Examples of this can be seen in many different games, and is often found in puzzle segments, as these are sections of the game where players are most likely to get stuck. In a 2022 video essay on the topic, game journalist Mark Brown of Game Maker's Toolkit highlights an egregious example of

this hinting mechanic within *God of War* (Santa Monica Studio, 2018). Largely known for being an action franchise, *God of War* included puzzle sections to act as palette-cleansing breaks for the player (Game Maker's Toolkit, 2022), as a way to give the player a rest from the high-octane action sequences and vary the pacing of the experience. These sections never last very long, and usually involve the player character having to hit certain targets with their axe to activate a contraption, or complete some similar non-combat task in order to progress. During these sections, if the player character hasn't made progress for a short time, Atreus, his son, will provide hints through the form of dialogue suggesting that the player character tries something. This hint will always be correct and help facilitate progress through the puzzle, but is often delivered very quickly, before there is a real chance for the player character to survey their surroundings and decide what to do (Game Maker's Toolkit, 2022). These hints help maintain the flow of the experience and progress towards the "real gameplay" or what may be considered to be the meat of the experience, but unfortunately, they sacrifice a large amount of social realism in doing so. If there isn't enough variety in the voice lines recorded for hints, the game may deliver repeated lines through Atreus, further highlighting the artificial nature of the character. The hints could also be seen as non-diegetic in the context of the narrative, as it is strange for the player character, an actual god of war (largely portrayed as independent and capable), to be being helped by their child who is meant to be the immature character that the player character is assisting. This once again highlights the artificiality of the interaction between the player character and Atreus, laying bare the function Atreus serves and by extension detracting from the social realism of the interactions between the player character and Atreus.

It is important to mention that the inclusion of this sort of hint system is not inherently bad for a video game. For a game like *God of War*, the emphasis is largely placed upon the action sequences, meaning that players will mostly be playing the game to experience those sections. This means that ensuring players won't become stuck or frustrated during puzzle sections is much more important than it would be in a pure puzzle game such as *Portal 2* (Valve Corporation, 2011) or *The Witness* (Thelka Inc., 2016). Players will pick up these games *because* of their puzzles, and therefore won't need as much hinting or assistance when stuck, as they will expect to encounter

that sort of adversity throughout the experience. It is also pertinent to highlight that the hints themselves are not the issue being highlighted in this section, as there is no doubt that many players appreciate assistance when stuck at a point in a game. The focus is instead on the method through which they are delivered. If a hint is delivered by a character in a way that does not adhere to social realism, this could serve to detract from the overall level of immersion the experience provides, as it becomes harder for suspension of disbelief to occur.

An example of a game including hints effectively while maintaining social realism is *Dishonored* (Arkane Studios, 2012). While exploring a manor during a party, other guests can be overheard discussing how they managed to sneak upstairs even though the guards say it's off-limits. This example maintains the illusion of the NPCs being independent, as it is through an eavesdropped conversation that this information is gleaned, rather than being directly told by a character whose purpose is largely to assist the player character. This is how lots of information is delivered in the *Dishonored* franchise, with certain methods of assassination or traversal through the levels being revealed through overheard conversations. By providing hints in this way, the game's assistance is much more subtle, as it creates the impression that the world must be explored diligently to find solutions, rather than having the answer out in the open. I argue that this will not detract from social realism, as there is always a pretext for these conversations to be occurring, and it is much less likely to feel as though the sole reason for the lines being spoken is for assistance (this also creates an impression of the world and characters being independent entities of the player character, resulting in a decentralising effect).

Conclusions

Social realism is hard to objectively quantify, as it requires evaluation of whether characters are reacting to situations appropriately, which in many cases is down to individual interpretation. The purpose of this section was not to identify games and grade their level of social realism, but to offer an argument for how social realism could result in a decentralising effect, as NPCs are made to seem like independent characters rather than "hint machines", created with the sole function of assisting the player character. When other characters are transparently included with the goal of

making progressing through a level as frictionless as possible, they can serve as a reminder of the artificial nature of the game environment, creating a centralising effect. The more socially realistic an NPC's interactions are with the player character, the easier it becomes for suspension of disbelief to occur, and immersion and investment to begin. This can also serve to create a decentralising effect, as the player character is being treated normally by others, which could create the impression of them just being a participant within the game world, rather than the reason for its existence.

When considering the impact this could have on a game's immersion levels, it is useful to refer back to the factors of immersion and presence introduced earlier. One standout factor of presence that is extremely relevant to this section is the "quality of social interaction", as well as "the users responding to the computer itself as an intelligent, social agent" (McMahan, 2003, p.72). Prioritising social realism when developing a game addresses these factors directly, as they ensure that NPCs react to the player character in a realistic, believable way. This serves to increase the sense of presence, which, as has already been covered in previous sections, has a clear positive correlation with immersion.

6: Knowledge of unwitnessed events

Defining knowledge of unwitnessed events

Knowledge of unwitnessed events is the name I have given to another technique I have identified that can be utilised to create a decentralising effect. What this term means is that the audience are made aware of events taking place in the environment that are not reliant on being witnessed directly to happen (or at least there is the illusion of such events taking place while the audience is absent). By bringing attention to the fact that an environment or area isn't waiting for direct attention to initiate events, the world can be made to seem more genuine which can provide a more immersive experience. The reason that this decentralisation can add to the genuineness of a game world is through parallels that can be drawn between the simulated world and the real one. In the real world, people are made aware of events that have taken place without their presence all the time. Whether it be through the news, or through friends telling stories, we are inundated with second-hand accounts of goings-on that we were not witnesses to, which serves as proof of the wider world around us. Of course, these second-hand stories are only a side effect of these events actually having occurred, with most events that happen in our real world being completely separate from us as individuals, as they are totally not reliant on our presence to happen.

Through a game's development life cycle, there will be countless rounds of optimisation that occur to ensure that the game's performance is optimal and that the experience is as smooth as possible for players. This means that, in order to save resources, if a player isn't looking at or close to something, it won't be rendered at all by the game engine. Unlike in the real world, if an element of the game environment is not seen on screen, it often won't even exist. This is what the concept of unwitnessed events can serve to mask. By including events that happen independent of the player character's presence, the impression is created that the whole game world could exist without any interaction, which in turn increases the believability and realism of the world being interacted with while also creating a decentralising effect.

Unmissable events

The urge to show a player everything that a game has to offer is understandable from a designer's standpoint. The player is experiencing something that might have taken years and a team of people to create, and it is tempting to force spectacle upon them by waiting for the playable character to be present for important or impressive events to be triggered. This is seen in the story modes of big-budget shooters, as well as in the *Uncharted* (Naughty Dog, 2007) franchise, where the player character travels from set piece to set piece, somehow arriving at each new location just in time to witness a new bombastic event. This can result in extremely impressive and memorable moments, but also achieves the opposite of decentralisation. By escorting the playable character from one spectacle to another, the game is indicating just how central to the experience they are, with the world being presented more as an element that facilitates entertainment and enjoyment than a believable environment that the player character happens to exist within.

When done poorly, this will only serve to highlight the artificiality of the experience. An example of this can be seen in many *Call of Duty* (Activision, 2003) games, where your NPC squad mates will always wait for you to initiate encounters (waiting behind doors or corners until you get there, for example) even if within the game world they are in extreme danger, which serves as an example of when ludological elements of a video game can conflict with narrative elements. Of course, the real reason for this delay from the NPCs is to provide an experience that serves up each encounter in a particular and thoroughly planned way. However, by forcing this too much, the result can be that the player is reminded that they are interacting with an artificial world every time an event "waits" for them. It is relevant to consider how these unmissable events also affect the social realism of an experience. If the decision is made that an event needs to be witnessed and therefore NPCs' progress through an area is halted before the player character reaches a certain point, this could cause the characters in a game to act unrealistically. This would lower the social realism of the experience, and make it harder for suspension of disbelief, and therefore, immersion, to occur.

Pathologic: being notified of unwitnessed events

In contrast to this, there are other games that include events that will *always* happen, regardless of the player character's presence, which can create the impression of a richer world less dependent on interaction (even though, as previously established, all single player worlds are completely dependent on this). An example of this in use can be seen in *Pathologic* (2005), which has been included in lists of the best immersive sim games (Smith, 2022) and has been hailed as "one of the most immersive video games" (Grimes, 2022). In this game, you play as one of three characters in an open world tasked with curing a small village of a plague. The game is broken into seven days, with the plague spreading and worsening each day, and the player character fighting to do what they can to assist the village with the meagre resources at their disposal.

At the end of each day, the game displays a recap that goes over how many are infected, whether anybody has died, and other general information to do with the wellbeing of the village. While earlier it was highlighted that UI screens like this can serve to highlight the artificiality of the experience, in this section the focus is not on the presence of the screen but the information that this screen is delivering. The game will also mention certain events that are to happen each day, as well as other characters giving jobs to the player character. The game may also highlight characters that have become sick during the night. The choice can be made to engage with these tasks or not. The significant element of *Pathologic* is that there isn't a "game over" screen presented for not attending these events or completing these tasks incorrectly. Instead, the game continues and leaves the player character to live with the consequences of their decisions. For example, it could be made apparent that one of the local leaders is at risk of infection, with the choice being available not to visit them to administer immunity boosters. This missed event will result in the character becoming infected, being left with only days to live. By the end of the experience, there are so many tasks per day with a large number of characters potentially becoming infected that it is almost inevitable that it will become overwhelming, resulting in the need to skip visiting certain areas or people to prioritise what is deemed as most important. By forcing these choices to be made, and making it clear that these meetings and events are being missed out on, the game is creating the impression of a world that exists independently of the protagonist, and that hasn't necessarily been created with the sole purpose of facilitating enjoyment. Instead,

the impression is created that the playable character is a small cog in the machine that is the world of *Pathologic.*

By constructing the world and mission system in this way, the game facilitates suspension of disbelief; the artificiality of the world and its systems are being masked by the inclusion of unwitnessed events that are highlighted by the game, which potentially diverts attention from the artificial nature of the environment that is being interacted with. It is relevant to mention that although there isn't a "game over" screen shown for failing their daily tasks, the player character can still die, which will trigger such a screen and prompt them to restart from a previous checkpoint. I mention this to illustrate why *Pathologic* is different from *Battlefield 1's* inclusion of inevitable failure in its opening mission, and to show why they each illustrate different concepts of decentralisation.

This has been an example of a game only *telling* the player they have missed something that happened without their presence; next I will detail how an experience can *show* a player these unwitnessed events.

Outer Wilds: visiting previously unwitnessed events

Another example of unwitnessed events being highlighted is seen in *Outer Wilds* (Mobius Digital, 2019), although the method this game uses to bring attention to these unwitnessed events is very different to *Pathologic. Outer Wilds* has featured on lists of the most immersive open world games (Game Rant, 2023) and of the most immersive sci-fi games, with the game's ambience being highlighted as "doing wonders when it comes to immersing players in the gameplay loop" (Kurten, 2023). The central game mechanic of *Outer Wilds* is that the player character is stuck in a 22-minute time loop, and at the end of each loop the game is reset to the start again (with all of the knowledge gained from the previous loops still intact). The player character is an astronaut that can explore different planets and is trying to find out why this loop is happening and if it's possible to stop it.

By having this time loop present, the game can have multiple events occurring at the same time in completely different locations, but still provide the opportunity to see them all. By continuously playing the game, one can visit different locations each time and understand that every time a new loop occurs, all of these events will be happening with or without the player character being there to witness them. For example, one planet has a black hole within its core that is slowly destroying the planet from the inside. If this planet is visited too late in a loop, there may not be that much of interest to discover, but with the ability to go back to the start of the cycle, it can be visited earlier with the option to explore all that was missed in previous loops. Another example is a cavernous planet that is continuously filling up with sand, meaning it is only able to be explored early on in each loop, before the caves are all blocked. All of these time-based systems and interactions on the separate planets are occurring independent of the player character's presence, which creates the impression of exploring and understanding an already-established environment, rather than navigating through a world created solely for enjoyment.

Another mechanism that *Outer Wilds* introduces is a probe camera that can be shot out by the player character to take photos of its surroundings. This means that the probe camera can be left on one planet while the player character travels to a completely different location, while still taking photos with the probe and seeing time-sensitive events occurring in their absence. This reinforces the effect of the world not being reliant on any interaction to exist, as these events can be witnessed regardless of the player character's proximity to them. This is another example of a decentralising effect being created through an awareness of unwitnessed events. While *Pathologic* handles unwitnessed events in the simpler way of highlighting at the end of each day which tasks and deadlines were missed, *Outer Wilds*' handling of highlighting unwitnessed events is achieved through a narrative mechanic that gives options for exploring anything that would otherwise be missed if only a single run-through of the time loop was afforded. However, both methods result in the game highlighting that the environment is not relying on the player character's presence for the initiation of in-game events.

In the case of *Outer Wilds*, it is also relevant to discuss the developer intention of including these decentralising techniques. In a documentary by games journalist organisation Noclip (2019), the developers of *Outer Wilds* are interviewed regarding the technical and creative processes that went into the creation of the game. This documentary gives insight into the design pillars behind the game and what the developers considered important throughout the creation process. Alex Beachum (the creative lead for *Outer Wilds*) said "we tried really really hard … to make sure we didn't lose the sense that this is a world that doesn't revolve around you" (Noclip, 2019). This points to the fact that they didn't want the environment to feel player-centric, and speaks to why they ensured that "the world doesn't stop simulating just because you're elsewhere" (Noclip, 2019). This was achieved through a careful simulation of the solar system that the player character inhabits, ensuring that all events within the system are simulated, with or without the player character's presence. Going into how this was done is beyond the scope of this paper, so the focus of this section is the resulting impression that is created through this (that of unwitnessed events occurring). These quotes are relevant to my research, as they confirm that one of Mobius Digital's goals for their game was the effect of decentralisation within *Outer Wilds*' environment. While developer intent isn't a prerequisite for a case study's inclusion in this research (as the focus isn't on the intent to decentralise, but rather the effect of decentralisation that these methods cause), it is useful to see a case where a developer explicitly wanted to create an effect of decentralisation, which in turn informed many of the design decisions that went into the creation of their game.

Conclusions

Offering the player knowledge of unwitnessed events certainly results in player decentralisation. The game is highlighting, one way or another, that things still happen independent of the player character's presence to trigger them. This could serve to shift how the game world is perceived, as the impression is created of the world not being reliant on the player character's presence to exist. If viewed through the lens of immersion and the various conditions that can result in it, it is also clear how this technique could result in increased levels of immersion within the game world. By ensuring that events happen within the world regardless of the player character's presence, the developers are maintaining a consistency in the rules of the game world. This links back to one of

the conditions of immersion I highlighted previously: “the conventions of the world must be consistent, even if they don’t match those of ‘meatspace’” (McMahan, 2003, p.69). By being made aware of unwitnessed events, we are being explicitly told that, regardless of our presence, the world and its conventions will continue; *Outer Wilds’* black hole planet will still swallow its outer crust every loop, and *Pathologic’s* various characters will still become exposed to the virus spreading throughout the village. This section has highlighted different ways through which unwitnessed events can be highlighted by a video game, as well as demonstrating why this results in a decentralising effect. By comparing what these techniques achieve with various criteria for immersion, it is made clear that the implementation of these techniques could result in a more immersive experience, which is useful for understanding why they have been employed.

7: World persistence

Defining world persistence

When using the term “world persistence”, I am referring to elements in the world that stay consistent across different player lives. Games that don’t utilise this technique may reset a world or create a new one upon a player character death, which highlights the fact that the world is built with the purpose of player interaction in mind. With the use of world persistence, however, the impression is created of a world that outlasts the player character, as it can be seen that the world will stay consistent regardless of their death. This belief that the world will stay unaffected by the death of the player character creates a decentralising effect, as the impression is created that the world isn’t reliant upon the player character’s presence to exist. It can also aid in making a world seem more believable, as the game world is brought closer in nature to the real world – a world that would and does carry on when people die.

Project Zomboid: evidence of past lives

When considering how world persistence can be implemented within a game, the method that this writing highlights is when a game includes elements of a past player character’s life in the world throughout future play-throughs. Included in a list of the most immersive open world games (Game Rant, 2023) *Project Zomboid (PZ)* (The Indie Stone, 2013) contains an example of this idea. The game is in the open-world survival genre; players are dumped into a world overrun by zombies with little to no equipment and tasked with not dying for as long as possible. One memorable game mechanic of *PZ* is how it handles player deaths. Upon death, the game will not allow the same character to respawn. Instead, a new character must be created to enter into the same world that the old character inhabited. The fact that multiple distinct playable characters can be within the same world emphasises the idea that the player character is not a protagonist of the world in the traditional sense, and is simply existing in a world that wasn’t designed around accommodating them. This mechanic has some similarities to the *Battlefield 1* opening mission that I described in chapter four. Both see games highlighting playable characters’ impermanence within the game

world, and portray the game world as something that can outlast the player character. A key difference between the two is in how they demonstrate the player character's insignificance within the game world. The playable characters' deaths in the opening mission of *Battlefield 1* are inevitable, with many different player-controlled characters being made to fail and die within moments of each other. *PZ* does not do this, allowing a familiarity to emerge with the playable character as they strive for survival within the hostile environment of the game. Tens or even hundreds of hours could be spent surviving with one character, gathering resources and building up a base by constructing various defences. Rather than demonstrating the player character's insignificance through repeated failures and deaths, *PZ* shows this through affording the player character no special treatment upon their eventual death (however long that may take to occur), and showing evidence of previous playable characters being treated no differently to a zombie NPC.

To further strengthen the effect of decentralisation, *PZ* includes evidence of previous playable characters within the game world. While exploring the environment as a new character, the choice can be made to explore old locations that have been visited previously. There is a chance that, while doing this, the player character encounters one of the previous characters that has now turned into a zombie and is carrying old loot from a previous life (such as food, clothes or weapons). By placing more significance on the consistency and persistence of the game world and less on any single player character, an impression of the player character's unimportance within the game world is created, creating a decentralising effect and furthering the illusion of the game world not being reliant on any interaction to exist.

World persistence in MMOs

An example of this idea of world persistence being employed outside of a single-player experience is seen in massively-multiplayer online games (MMOs). These games are made to be played by extremely large numbers of people at once, and can often feature tens or hundreds of players on-screen together. This is an instance where the effect of decentralisation is not an illusion, but is instead a direct product of genre. The game world is designed to be persistent, and would be the

same with or without any single player character's presence; there would still be numerous other player characters interacting with the world in their absence (Sullivan, 2015). Through the very nature of the game, the player characters' insignificance is emphasised, as each player is forced to face the fact that they are only one of many, and that no matter what happens to their character, the world they are inhabiting will stay largely the same. I am highlighting this as an example of what decentralisation within single player games may be attempting to achieve – the impression of a world that will endure beyond the life of the player character and that is not reliant on their presence and interaction to exist.

When a player character dies in an MMO, the world does not and cannot halt and reset for them, as many others are still participating in quest lines or boss battles of their own. I argue that this is a factor that can make an MMO world extremely compelling, as the game presents a large network of interacting entities, all with their own conflicts and goals. This same impression can be created within a single-player world through the implementation of decentralisation techniques that present the illusion of a world with agency. The world of an MMO also won't pause upon a player logging out of the world, as it has to facilitate the interaction of the many other players that could be interacting with the world at any given moment. This leads to the potential for genuine unwitnessed events, which is another of the decentralisation techniques that I introduced and explored in a previous chapter.

Calleja highlights another interesting aspect of MMOs when considering their potential for engaging players, noting that a multiplayer experience played over a long period of time like this with fixed player characters allows for certain characters to accrue a reputation over time "positive or negative among players on the same server" (Calleja, 2007). This concept of many different player characters becoming well-known is another example of decentralisation within MMOs, as the players in a server are constantly aware of other characters operating within the game world having as much impact as them.

Conclusions

This section explored ways in which including aspects of world persistence in single-player video games can create a decentralising effect. By explicitly demonstrating that the game world they are interacting with will not be swayed by their character's death, the illusion is created that the player character is a regular participant within this environment, when in fact the player is the sole reason that the environment exists and is able to be perceived. To illustrate and bolster this point further, I have highlighted how MMOs are a genuine example of player decentralisation through world persistence, where the player is such a small cog in the machine that makes up the vast network of players interacting and engaging with the game, that the world *cannot* halt or wait for the player character to return upon death.

After examining the effect of including elements of world persistence in a single player game, the ideas around the specific examples of genre mechanic subversion are called to mind – more specifically when considering how these methods of decentralisation could result in greater levels of immersion. When examining *Battlefield 1 (BF1)*, and the methods through which its opening mission created a sense of decentralisation, I reintroduced the idea of suspension of disbelief and argued that, through the use of the technique highlighted (subversion of a genre mechanic within *BF1*), the game world is made to seem more genuine and brought more in line with our own real world, which therefore lessens the barrier that prevents suspension of disbelief. This argument can also be applied to the idea of world persistence, as the inclusion of elements of world persistence bring the conventions of the fictional game world closer to the conventions of our own real world – namely that the world, along with the many events occurring across it, will not simply pause upon an individual's absence or death. By lessening the barrier to suspension of disbelief, I argue that this technique of decentralisation makes it easier for immersion to occur within the experience.

8: Conclusion

I introduced this thesis by describing what it would be exploring: the concept of decentralisation in single-player video games, including what techniques lead to decentralisation, and what impacts player decentralisation could have on the games that employ these techniques. When first outlining the definition for decentralisation, I highlighted that from its definition alone, people may assume that its implementation in a video game could result in lower levels of immersion in the experience. As immersion is often seen as an implicit goal in the creation of many single player games, this raised the question of why these various decentralisation techniques are present.

However, the single-player games identified with decentralising elements were all widely considered to be immersive experiences, suggesting that decentralisation may not have an adverse effect on immersion, and could have a positive impact. This highlighted the need to build up a strong definition of immersion and the terms surrounding it in order to answer my research questions, as it became increasingly clear that a comprehensive understanding of the concept would be necessary. Through the research included in my literature review, a set of criteria was built that, when met, would increase the immersion levels of a single-player experience. The bulk of this research identifies and explores various methods of decentralisation, and compares what these methods achieve with the criteria identified for immersion. Doing this sheds light onto what effect these techniques have when included in single-player experiences, by demonstrating that their implementation can result in increasing levels of immersion.

The first technique examined was genre mechanic subversion. This paper identifies this as when a game, through its genre that establishes a “contract of play” with the player, sets up the player to expect that certain mechanics often found within the genre will be present in the game. These expectations are then subverted through the deliberate omission of these mechanics, which can result in a decentralising effect. Two case studies were used to illustrate this technique. The first was *Battlefield 1,* which subverts the military FPS genre by including certain and inevitable death for the player characters within this mission, thus creating a decentralising effect. The second case

study was *Disco Elysium*, which confounds extreme player agency by only affording agency when it comes to shaping the player character's inner thoughts, feelings and reactions to the situation around them.

The next technique identified was the inclusion of social realism. This paper argued that, through the prioritisation of social realism in a single-player game, a decentralising effect is created through the impression that the player character is just one entity of many, all interacting in a world larger than that shown to the player. *Disco Elysium* was examined again, highlighting how the NPCs within the experience don't cater to the player character's lack of knowledge, acting surprised and concerned when they need to inquire for basic facts about the world they were inhabiting. This stops the NPCs from seeming artificial within the experience, as the impression is created that they are independent of the player character and have not been created with the sole purpose of facilitating seamless progression.

The next technique that covered is the knowledge of unwitnessed events, which is defined as when the game makes the player aware that there are events occurring within the world without their presence. This chapter focuses on two case studies: *Pathologic* and *Outer Wilds*. *Pathologic* makes unwitnessed events apparent by displaying when a task has been failed or a character has died through the player character's inaction. This makes it clear that events are occurring regardless of the player character's presence, creating a decentralising effect. *Outer Wilds* handles this differently, by structuring the game as a time loop that repeats on the player character's death. Through this, the game can have many simultaneous events occurring in various locations that will all be visitable at some point by the player character, making it explicitly clear that these events will always happen regardless of their presence.

The final technique highlighted in this thesis is world persistence, which involves the game world elements staying consistent across multiple player character lives, which in turn demonstrates the player character's insignificance in the world they inhabit, creating a decentralising effect. *Project Zomboid* is highlighted as an example of a game that uses this technique, as upon death, the

option is available to respawn as a new character that can explore the same world that the old player character died in. MMOs were also examined as an example of genuine world persistence within a video game, as the nature of the genre MMOs inhabit necessitates the presence of a persistent world for all players.

Throughout these sections exploring decentralising techniques, this paper was considering the effect that employing them was having on the video games that they are found in. When comparing the effects these techniques have with the various criteria for immersion established in the literature review, it is apparent that their inclusion met some of the criteria. This has led to the conclusion that the inclusion of decentralising techniques within single-player video games can set the stage for greater immersion in the experience. Examples of the criteria for immersion that were met include ensuring that the conventions of the game world are consistent, maintaining realism in social interactions with other characters, and creating an easier suspension of disbelief (and therefore making immersion easier) through bringing the game world's conventions closer to those of the real world.

There are many further avenues around decentralisation that deserve research, but that fall outside the scope of this thesis. For example, one aspect that was briefly touched on in this paper but not fully discussed is the political analysis of decentralising the player character, and how the implementation of decentralising techniques could affect the messaging of a video game. Further research into the various techniques of decentralisation and their effects is warranted, as this paper is an introduction of the term and its effects; serving to highlight its potential for academic discussion, rather than a comprehensive compilation of all decentralising techniques and their uses.

Completing this research has highlighted the potential for discussion around player decentralisation, an area that has not yet been thoroughly explored academically. The thesis focuses on an issue at the core of single-player video games: the centralising of the player within the experience. The research finds that there are techniques that can be employed to create a

decentralising effect, and that these techniques also meet multiple of the identified criteria for immersion, showing their potential for increasing immersion when used. When considering how highly regarded immersion is within interactive media and video games, this highlights the relevance and usefulness of this research within academia.

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