Ludic Dysnarrativa: How Can Fictional Inconsistency In Games Be Reduced?

by
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Abstract

The experience of fictional inconsistencies in games is surprisingly common. The goal was to determine if solutions exist for this problem and if there are inherent limitations to games as a medium that make storytelling uncommonly difficult. Termed ‘ludic dysnarrativa’, this phenomenon can cause a loss of immersion in the fictional world of a game and lead to greater difficulty in intuitively understanding a game’s rules.

Through close textual analysis of *The Stanley Parable* and other games, common trends are identified that lead a player to experience dysnarrativa. Contemporary cognitive theory is examined alongside how other media deal with fictional inconsistency to develop a model of how information (fictional and otherwise) is structured in media generally. After determining that gaps in information are largely the cause of a player feeling dysnarrativa, it is proposed that a game must encourage imaginative acts from the player to prevent these gaps being perceived. Thus a property of games, termed ‘imaginability’, was determined desirable for fictionally consistent game worlds. Many specific case studies are cited to refine a list of principles that serve as guidelines for achieving imaginability.

To further refine these models and principles, multiplayer games such as *Dungeons and Dragons* were analysed specifically for how multiple players navigate fictional inconsistencies within them. While they operate very differently to most single-player games in terms of their fiction, multiplayer games still provide useful clarifications and principles for reducing fictional inconsistencies in all games. Negotiation between agents (designers, players, game rules) in a game is of huge value to maintaining coherent fictional worlds and social information in some multiplayer games takes on a role close to that of fictional information in single player games. Dysnarrativa can also be used to positive effect in certain cases such as comedy games, horror games or for satirical purposes.

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Introduction: Druckmann's Dismissal of Dysnarrativa

It is worth a quick word on why fictional inconsistencies in games should be reduced. Ever since games have introduced a fictional setting for players to imagine there have been problems with fictional inconsistency. This fictional inconsistency is not something I believe should (or even can) *always* be eliminated but it is curiously ubiquitous in games and its prevalence causes me to wonder why glaringly obvious inconsistencies are not resolved more often. I hypothesise that this is due to a limited understanding of how best to mesh fiction with the medium-specific qualities of a game and is thus the focus of my research.

One of the most commonly discussed examples of what this thesis will go on to call dysnarrativa is that of *Uncharted: Drake's Fortune* (Naughty Dog, 2007) protagonist Nathan Drake appearing an otherwise likeable everyman until, ludically, he is required to kill hundreds of mercenaries throughout the course of the game (Peckham, 2016). This is considered, by many (Juster, 2009; Parkin, 2015; Suellentrop, 2016; Peckham, 2016), to present a tone at odds with the character's portrayal (remarkably free of remorse or stress-related trauma). In an interview, *Uncharted* series designer Neil Druckmann discusses the idea of ludonarrative dissonance in the series coming to the following conclusion:

> Because we don't buy into it. I've been trying to dissect it. Why is it that Uncharted triggers this argument, when Indiana Jones doesn't? Is it the number? It can't be just the number, because Indiana Jones kills more people than a normal person does. A normal person kills zero people. And Indiana Jones kills a dozen, at least, over the course of several movies. What about Star Wars? Han Solo and Luke Skywalker, are they some sort of serial killers? They laugh off having killed some stormtroopers. And in The Force Awakens, we see that a stormtrooper can actually repent for the person he is and come around, and there are actually real people under those helmets. It's a stylized reality where the conflicts are lighter, where death doesn't have the same weight. We're not trying to make a statement about Third World mercenaries, or the toll of having killed hundreds of people in your life. (Suellentrop, 2016)

Druckmann has worked on numerous award-winning titles and the developer he works for, Naughty Dog, is at the forefront of narrative design for games. His credentials are hard to better within his field and yet Druckmann is dismissive of identifying it as fictionally inconsistent. Yet, I don't think it is a foolish criticism to ask why Nathan Drake kills so many people. In the movies that Druckmann cites, the main character either kills less than 20 people in self-defense (as is the case with Indiana Jones) or they also kill a disturbingly large amount of people (when Luke Skywalker destroys the Death Star it can be assumed that he kills more than a few

hundred people) but for a previously explained greater good (i.e. galactic peace). To be clear killing even one person can be disturbing but, as Druckmann points out, death 'doesn't have the same weight' in fiction. However, Druckmann also asks if it is 'the number' which I think is part of the point of contention for many.

The number of people Nathan Drake kills isn't important just because the number indicates Drake's strange morality (quipping one minute, while gunning down 20 men the next). There are other problematic things it brings to the forefront of our mind. In a regular playthrough of *Uncharted 4* (Naughty Dog, 2016) the player will (without much difficulty) end up killing at least 500 men. Not only does this potentially paint Drake as morally disturbing but it prompts us to imagine the opposing force (in this case a private militia group) would have enough people in its employ for the loss of 500 men to not significantly impact their operational capability or morale. We are also asked to imagine that this force fails to defeat a single relatively less skilled combatant despite favourable odds. We might also wonder that even if Drake does all this in self-defense, why does he never remark upon the number of people he kills? Even Drake's luck does not seem to cover the fact that he, improbably, survives so many deadly encounters that are often weighted against him. Not only this but it brings to prominence, in our thoughts, that the numerous enemies we encounter are for the sake of a challenge. The number 500 is not describing the amount of fictional people Drake kills but rather it reminds us that we are simply shooting abstract targets in a video game that are then tallied by a computer. Death doesn't have the same weight because it is reduced to a statistic for the player to track outside of the fiction.

When determining the fictional consistency of a work of fiction, the audience may ask themselves questions of the work which, if not satisfactorily answered by that work, may lead to dysnarrativa. There will always be someone who turns around and asks why things must be a certain way in fictional worlds. Obviously not everyone can be satisfied by every given fictional world's consistency but there must be steps that can be taken to reduce the likelihood that it will disrupt the experience of a fiction.

It is easy to wonder if some cases of fictional inconsistency are simply pointless observations that do not really affect us unless we dwell on them. Walton (1990) suggests that to point out a logical inconsistency in a work is only of value if it reveals an aesthetic defect or legitimate criticism of that work, otherwise it is just a 'silly question'. Walton argues that in some cases, it makes no sense to question

why something is fictionally inconsistent as it detracts from the appreciation of the work and he gives several examples to underpin his argument. In *Othello* (Shakespeare & Watts, 2001) we do not ask why Othello, a military man and a moor, while undergoing extreme stress, is able to make grandiloquent speeches in iambic pentameter and fluent medieval English (Walton, 1990, p.176). The question of whether Othello is fictionally eloquent is, Walton argues, irrelevant to both criticism and appreciation. It is a 'silly question' (Walton, 1990, p.176). Without these seeming paradoxes, we would not be able to appreciate fiction. Walton further illustrates this with the example of Michelangelo's *The Creation of Adam* where there can be no-one fictionally witnessing the event of God infusing Adam with life. Walton states that 'the cost - if it is a cost - is the nominal clash with the fact that fictionally *The Creation* is unobserved, a clash that is to be ignored' (Walton, 1990, p.237). Ignoring this inconsistency is for the sake of access to the fictional world and the question of *The Creation's* fictional consistency is only relevant when the work exhibits a problem. As Walton says:

> To pursue or dwell on them [silly questions] would be not only irrelevant to appreciation and criticism but also distracting and destructive. The paradoxes, anomalies, apparent contradictions they point to seem artificial, contrived, not to be taken seriously. We don't take them seriously. Ordinarily we don't even notice them (Walton, 1990, p.176).

Ignoring silly questions is not necessarily to avoid the debate but rather the price of admission. For the sake of a fiction functioning we cannot dwell on every minor inconsistency. We have a cognitive need to explain things but this must be tempered by a need for appreciating fiction. Fiction is never perfect and there are ways in which we can interpret it as making sense even when it may not literally appear that way.

How, then, can we tell the difference between a 'silly question' and an 'aesthetic defect' in a game? Walton suggests the rather succinct approach that asking a silly question makes the critic look silly whereas criticising an aesthetic defect makes the work look silly. While a pithy way to frame the discussion, determining who is silly is still, to an extent, a matter of opinion. Subversive players already present a problem in this area because silly questions are not just asked but enacted within the work to make the game look silly at the player's whim. While Walton's concept of 'silly question versus aesthetic defect' is interesting he admits that it is not a perfect system: 'Declaring a question to be silly does not answer it; it is an excuse, however legitimate, for not answering it' (Walton, 1990, p.180). In a way Druckmann's dismissal is that the claim of dissonance in *Uncharted* is simply a silly question.

Druckmann follows Walton's other suggestion in dealing with silly questions: 'An alternative strategy is to declare offending fictional truths deemphasized, rather than disallowing them' (Walton, 1990, p.182). Druckmann either dismisses the criticism of *Uncharted* as a silly question or deemphasises the 'weight of death' by appealing to the fact that the fictions he mentions are 'stylised realities' and so even if the question is not silly, this aesthetic defect is de-emphasised by Druckmann. I would argue that, for now at least, it is a valid question since Drake's proclivity for killing does stick in the minds of many people and if it can be resolved then why not resolve it? There may be a solution to reduce aesthetic defects such as these and such a solution is the goal of this thesis.

This research was undertaken using a humanities approach because understanding dysnarrativa in relation to the structure of games and the experience of players is not an empirical problem with a quantifiable answer. The condition of dysnarrativa is experiential and subjective and as such requires a multivalent humanities approach. This is an investigation that relies on informed speculation and a qualitative evaluation of the experience of play. Games have no established methodologies though concepts from outside of game studies have proven useful in their discussion. The problem investigated by this thesis is related to both the perceptual mechanisms through which we experience games (as agents in, and audiences of, a game) and the historically-located cultural values that inform these perceptions.

Dysnarrativa is not universally felt in any given case and there are many fringe cases where some players may forgive it while others can't forget it. To apply rhetoric and theory to something that is often intangible and hard to fully describe is a challenge. The experience of playing a game situated in a fictional world requires complex reading skills and many interpretations are possible at any given point. As I have stated, this thesis is informed largely by direct experience of various case studies guided by the humanities and cognitive science. This thesis does not intend to produce an absolute, scientific benchmark, only a useful and practical guideline on maintaining a game's fictional consistency that is sure to require further discussion on the many outliers and anomalies that come with such a complex medium. Understanding the complexity of the problem is prioritised over finding a panacea for dysnarrativa. This thesis is not interested in asking whether fictional consistency should or shouldn't be tolerated. Rather, it is concerned with how to reduce it. To do so this thesis looks to examples of fictional inconsistencies in games (what will eventually be called ludic dysnarrativa) and deconstructs them to offer solutions.

In the first chapter, a close reading of a game about this very subject, *The Stanley Parable*, is examined to see if it provides a clearer look at the problems presented by games generally. This will help articulate the causes and nature of the problem of dysnarrativa. Chapter 2 moves to locate gaps in information which cause dysnarrativa and how to repair these. Drawing from cognitive dissonance theory, musicals, pornography, comics, gestalt psychology and conceptual blend theory a model of how the imagination closes gaps in understanding is formed. A theoretical model is employed by this thesis to explain the phenomenon of dysnarrativa. A model was chosen as one of the final outcomes of this research as it is more practical to explain the problem and solution visually than through written word alone. It is also simpler to input case studies into a template model to show how elements function within a given work. If a model was not used then it could become difficult to explain the processes at work in a game succinctly and without resorting to esoteric terminology. To further refine this model chapter 3 looks at a diverse range of games to determine practical principles for ensuring that gaps that would otherwise be closed by dysnarrativa are closed by the player's imagination to form a fictionally consistent experience. Before conclusions are assembled, chapter 4 takes some time to determine if there are any specific exceptions to the principles established for multiplayer games. The fictions of MMOs, fantasy role-playing games and even sports are discussed to help refine the conclusions of the thesis.

Through close textual analysis of various games I have procured a plethora of useful case studies to back up my arguments about how game fictions operate. Since dysnarrativa is an active phenomenon I felt it necessary to gather concrete examples of its occurrence as well as cases where it has been avoided. Without these examples the thesis lacks any first-hand basis for asking the question of whether dysnarrativa can be reduced. The analysis of case studies provides both evidence and understanding of dysnarrativa. I have also acquired relevant case studies from secondary sources (not always games) that were invaluable in discussing dysnarrativa in games. Examining the problem through the multiple lenses that other disciplines provide is an approach which aims to give a better perspective on the problem than games studies alone. Textual analysis alongside this broad research of secondary sources illuminates the subject of how fiction is consumed in various contexts rather than limiting the scope of the research to just games. This is valuable since games studies as a field is relatively young and has yet to strongly benefit from the integration of various subjects that might aid its understanding of games. While this thesis does fall short in areas (there is a little

more jargon than I would prefer) the discussion is unique as a comprehensive overview of the structural nature of fictional inconsistencies in games.

In the conclusion of this thesis I hope to provide an answer to Druckmann in the form of a suggestion of how to improve *Uncharted*. To reduce the dysnarrativa his and others' games present could potentially lead to improvements in the games we play. How can fictional inconsistency in games be reduced?

Chapter 1: Before the Narrative Contradiction Gets Any Worse: *The Stanley Parable* and Dysnarrativa

My favorite extreme case is [*Grand Theft Auto* studio Rockstar's open-world Western game] Red Dead Redemption. It has this thing at the end that's supposed to be the touching finale, where you go back and take care of your family, having brutally murdered some 800 people, including at one point pillaging a poor Mexican town to get in with some group. So you've literally firebombed a Mexican village, and now it's supposed to be this sweet family moment. And then you go on the stat screen and it says 'Guys killed: 860.' It's on the screen because you're supposed to care how high the number is. Those things are incompatible for any reasonable human being, and when a game tries to pass it off as normative, it's jarring.

Game designer Jonathan Blow on dissonance in games (Peckham, 2016)

When such inconsistencies are found to exist, they may be quite dramatic, but they capture our interest primarily because they stand out in sharp contrast against a background of consistency

Leon Festinger (1957, p.1)

As these systems take on more narrative content, the interpretive nature of these structures [games] will be more and more important.

Janet Murray (1997, p.89)

Introduction

In this chapter several examples and cases of fictional inconsistency (which this chapter later defines as ludic dysnarrativa (hereafter referred to as dysnarrativa)) will be discussed in order that the foundations of dysnarrativa might be established. How does it arise and why is this? It will also be distinguished from similar terms already in use to describe fictional phenomena unique to games. The aim of the discussion is to determine the reasons for dysnarrativa's presence in games and to nail down the scope of the term. This is so that game's may be improved by presenting us with a better way of relating fiction through them.

What phenomena does dysnarrativa describe? Before getting into the discussion, it is worth giving a placeholder definition for the term dysnarrativa. The word will be defined more clearly later on but there is no currently-existing term that I can use to discuss my chosen topic easily. Therefore I must use the term before arguing for its definition. For now, a simple definition would be: fictional inconsistency found in a work of fiction which causes cognitive dissonance in the 'reader' of the work.

Dysnarrativa is a term borrowed from diagnostic medicine and refers to the unsettling experience of the discontinuity of autobiographical memory typically experienced by sufferers of Alzheimer's syndrome and korsakoff's syndrome. I borrowed the term as it seemed apt to describe the phenomenon I am discussing and prevents the coining of unnecessarily forced jargon. To put it simply, I characterise dysnarrativa as a feeling, by the audience, that a fictional world is inconsistent. Ludic dysnarrativa is usually when a fictional world breaks down for reasons specific to games. For example, the problem posed by this image taken from *Silent Hill* (Konami Computer Entertainment Tokyo, 1999) (See Fig. 1.1) is that a player can break a game's fictional consistency because the game's design allows them to. The statement about the absence of a dog by the game is contradicted by the dog's presence on screen. Another case is when a game misrepresents its fictional world in a way which seems unreasonable or distracting to a player (See Fig. 1.2). In this image taken from *Fallout 3* (Bethesda Game Studios, 2008) the locked door requires the highest skill level in lockpicking and yet is represented as half-broken, looking like a player might reasonably squeeze through it or kick it down. For now it is sufficient to understand that dysnarrativa refers to problems of a similar nature in games.

Figure 1.1 - The player-character of *Silent Hill* encounters a dog-like enemy whilst making a counterfactual statement about the presence of a dog. by Konami Computer Entertainment Tokyo (1999)

Figure 1.2 - A dilapidated door in Fallout 3 requiring the highest lockpick skill of 100 to open. by Bethesda Game Studios (2008).

The primary case study of this chapter is a game, *The Stanley Parable* (Galactic Cafe, 2013). *The Stanley Parable* is an interesting example of how dysnarrativa is articulated in a game and will provide some basic foundations on which the rest of this thesis is built. It is a highly reflexive game and uses its fictional inconsistency mostly as a vehicle for humour. However, it is useful for starting the discussion because it gives a lot of practical examples of fictional inconsistency which characterise widespread problems found in other games.

The Stanley Parable

(There are two versions of *The Stanley Parable*. One is the original which was a 2011 source engine mod that borrowed assets from *Half Life 2* and offered only 8 endings (Galactic Cafe, 2011). The one discussed below is the 2013 remake of the game which updated the game's assets and added more endings and other content to the game.)

The Stanley Parable is, initially, about an office drone named Stanley whose job is to push buttons specified by a monitor in his office. One day his monitor stops sending him orders and Stanley realises that his coworkers have mysteriously disappeared which makes him venture outside of his office in search of answers. Much of the information about the story and events in *The Stanley Parable* is related by a narrator who mostly tells the story by describing Stanley in the third person. However, the game is played from a first person perspective with the player in the role of Stanley.The player is able to walk, crouch and click on various buttons in the environment. Much of the games content derives from the player making choices presented to them in a number of ways. Usually the narrator will state that Stanley did something but the action Stanley takes is more or less dictated by what a player chooses to do. In this way a player can either be compliant with the narrator's statements or completely contradict what he has to say. This leads to many comically surreal sequences that deviate from the story the narrator originally attempts to tell. The game is cited not as a typical example of dysnarrativa but as a game that reflexively comments upon the medium much like John Barth's *Life Story* (1968) does for short stories.

The Stanley Parable thematises dysnarrativa, parodying common examples of genuine dysnarrativa found in other games. This thesis uses this framing of dysnarrativa to examine common causes of dysnarrativa whilst moving towards an argument for dysnarrativa as a comprehensive term. The game has multiple endings each of which result from player choices. I have tried to present the game's

endings in an order that develops the ideas of this thesis logically. However, since there is no chronological order to the endings in the game I have done my best to offer a linear review of the non-linear events of *The Stanley Parable*. I have collected endings that explore various facets of dysnarrativa. I have not included every ending of the game as there are many and as some are only jokes they have little relevance in helping forward a theoretical model to deal with dysnarrativa. The endings are referred to by the names found on this flowchart (See Fig. 1.3) for ease of reference and because many of the endings have no agreed upon name. This analysis also makes regular reference to quotes from the narrator of *The Stanley Parable*. To make it clear where the narrator has been directly quoted these quotes will always be italicised and centrally aligned. All *The Stanley Parable* quotes were transcribed directly from the game using the game's closed captions for reference. Some liberties have been taken with punctuation for the sake of emphasising certain extracts but the transcriptions are otherwise verbatim.

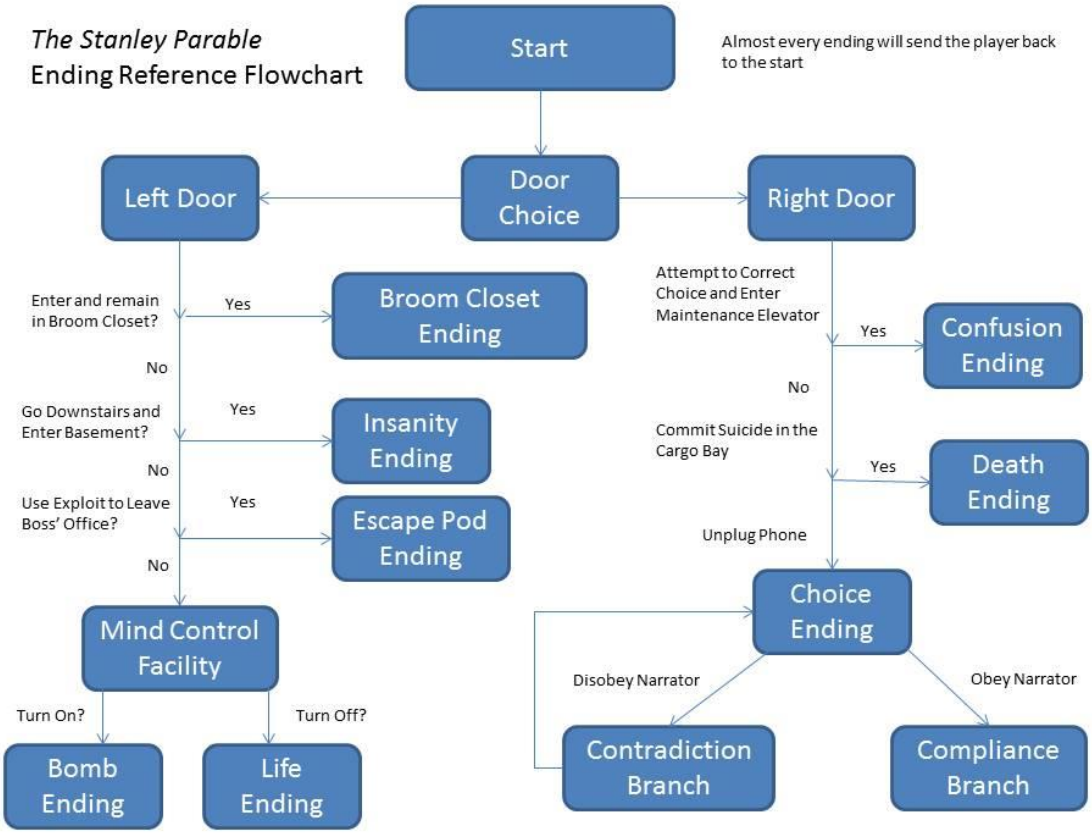

Figure 1.3 - *The Stanley Parable* Ending Reference Flowchart (note that not every ending is included on this chart, only those discussed in this chapter) [Author's own image].

Using *The Stanley Parable's* multiple endings and other examples, the problem of dysnarrativa will be examined through several endings taken from the game that will serve as this chapter's case studies. The Life ending and the Bomb ending will be used to discuss the place of the author's (or in the case of games, the designer's) role in dysnarrativa. The Choice ending, with its two paths of contradiction and compliance, will examine the player's role in dysnarrativa. The Broom Closet ending and the Insanity ending will be used to discuss how dysnarrativa can be used as an aesthetic device and can arise even in apparently consistent fictions. The Confusion ending and the various instances of Stanley's death will be used to discuss how the repetitive nature of games and the presence of fail states are two of the most common challenges to fictional consistency. The Escape pod ending and the Serious ending will briefly examine dysnarrativa's relation to cheating, glitches and the media and materials games are built with. Finally the conclusion will outline dysnarrativa's scope, defend its usage in lieu of other comparable terms and pin down the various causes and effects of dysnarrativa in preparation for the construction of a theoretical model that might guide understanding in how to reduce dysnarrativa.

The Life Ending and The Bomb Ending

Let us first pursue what happens when the player completely obeys the narrator and does everything they say to determine the reward of compliance. This series of choices culminates in the 'Life' ending.

The narrator tells Stanley to go through the left door which leads him to the meeting room. The player is then told to go the boss' office where they discover a secret door leading to a mind control facility implied to be controlling Stanley. Monitors watching over every co-worker's office show it to be some sort of Orwellian facility designed to control them. The narrator dramatically describes the stakes of Stanley's predicament emphasising the fact that his freedom has been taken away from him. Eventually the player discovers the mind control machine which they have the choice of turning on or off. Turning it off initiates the 'Life' ending. A giant door slowly opens on an idyllic countryside while the narrator describes Stanley's feelings.

> *No longer would anyone tell him where to go, what to do or how to feel. Whatever life he lives it will be his.*

The irony of the freedom ending is that Stanley wins his freedom by being told what to do by the narrator. The exact second the player steps outside the building, control of the camera is wrested from them and they have no choice but to sit back and watch a cutscene:

> *This was exactly the way, right now, that things were meant to happen. And Stanley was happy.*

While this is one of the few endings in which the narrator is depicted as a non-diegetic voice there is one brief section in the boss' office that breaks from this and can also be seen as *The Stanley Parable* cluing us in on the game's true intentions. Stanley's boss has a secret code on the door to the mind control facility that the narrator tells the player. Diegetically speaking there is no way Stanley could know this unless he can hear the narrator which momentarily breaks the illusion of the narrator's own story. Even if the player roleplays an ignorant Stanley, the narrator simply changes his story to allow the door to magically open by chance but not before expressing frustration with the player for not getting the obvious hint.

When games go the 'Life' ending path, trying to make a player feel good by telling them that they do, then the disconnect is obvious. Players get the sense that being told a completely authored story is to somehow contradict their role as an active agent within a game. If the narrator really wanted to tell this story so badly then why does he need us to act on his behalf? The same story can be delivered in another medium which does not require agency from the audience. Arguably the narrative of the Life ending fictionally contains the same information whether it is interactive or not. We might enjoy the story the narrator offers us and go along with it so that we may reveal more of this wondrous tale but it does give cause to wonder whether the story could be improved by our own actions rather than simply be primed, scripted or interpellated to act within the author's wishes (Althusser, 1971; Murray, 1997). The narrator even ruins the consistency of this story briefly when relying on the player's extra-diegetic presence and agency to guess the boss's code. This is where player agency and its relationship to dysnarrativa first enter the discussion.

Is there something inherently resistible about a game's fictional world? Even if a story presented to us is good, the temptation to change those bits we disagree with or would prefer happen is quite strong and games allow us to play out this curiosity (although with varying degrees of success). Not only is it tempting to resist but the existence of the option to contradict presents its own problem.

If a game allows us to contradict the story but we still wish to follow the story, what point is there in allowing us to contradict it? Perhaps the ability to contradict the narrator is part of a metagame in which the player strives to do nothing that would contradict the narrator. A potential fail state that is to be avoided. *The Stanley Parable's* design would indicate that this could be the case. The focus shifts from telling a compelling fiction to freeform play with the structure of that fiction.

Stories with multiple outcomes require a more active reader that separates the narrator and audience but includes them both inside of the text. Janet Murray in her examination of hypertextual fiction states: 'Contemporary stories, in high and low culture, keep reminding us of the storyteller and inviting us to second-guess the choices he or she has made. This can be unsettling to the reader, but it can also be experienced as an invitation to join in the creative process' (1997, p.38). If players can be seen as co-authors of a game's fiction it is frustrating when players are denied their part in co-authorship. When we approach the two doors at the start of the game something inside of us yearns to go through the right door just to see what would happen. Even if it collapsed the entire narrative wouldn't it be worth it just to see how we, the lowly player, can affect the carefully authored game that lies before us? Instead all we have left is just a niggling feeling that we have been shortchanged by complying with the narrator's somewhat dull story. A game of 'Simon Says' with some fictional embellishment.

The Stanley Parable's 'Life' ending compels the player to obey at every turn but this may only be carried out as an act of curiosity about what happens rather than an accepted prerequisite for play of any kind within the game. The narrative is too simplistic and straightforward for it to be a core motivation for many players. Instead the game reveals that games are often a way of playing with the structure of fiction rather than primarily telling a fiction. As the various endings are explored here it is worth remembering that each is a reflection of the choices made by the player each presenting their own complex relationship with the narrator.

Let's say we go along with the narrator right up until the very last choice in the 'Life' ending but then defy him at the last minute. That'll show him! Turning the mind control machine 'on' leads to the 'Bomb' ending. In the Bomb ending the narrator finds the player's final subversion of the story right at the end of a sequence of obedience to be very annoying.

If you want to throw my story off track you're going to have to do much better than that

The narrator undermines the power of the player by twisting the story so that the player activates a nuclear detonation system that begins counting down. The narrator taunts the player with sarcasm:

It's your time to shine! You are the star! It's your story now; shape it to your heart's desires.

The room the player is now trapped in is filled with buttons teasing a solution to ending the countdown and while the player interacts with the puzzle the narrator begins to reveal information with troubling implications. He reveals that he erased Stanley's co-workers but only in 'this instance of the story'. He also reveals that other playthroughs have involved different and often lethal consequences for Stanley. The narrator finally reveals that pressing the buttons does absolutely nothing and mocks the player's struggle: 'that timer isn't a catalyst to keep the action going. It's just seconds ticking away to your death'. Tonally the narrator is quite sadistic in this ending, revelling in his omnipotence. The narrator even adds seconds to the clock purely because he enjoys watching Stanley struggle.

He also implies that any control the player exerts is still another form of control by the designer. While the Life ending uses a cutscene to emphasise the lack of control, the narrator chooses to revel in the player's freedom to act with no impact on the outcome.

You're only still playing instead of watching a cutscene because I want to watch you for every moment that you're powerless, to see you made humble. This is not a challenge, it's a tragedy. You wanted to control this world; that's fine. But I'm going to destroy it first, so you can't

The narrator risks the existence of his world simply because of the prospect that the player might have control of it. However, we are quickly reminded that this will all be playing out again very soon.

Believe me I will be laughing at every moment of your inevitable life, from the moment we fade-in, to the moment I say: 'Happily ever-...'

The narrator is cut off by the bomb's explosion. This last statement is very revealing. Rather than tell the player they are about to die their inevitable death the narrator instead reminds them of their *'inevitable life'* a sort of horrific immortality that the narrator mocks. The 'fade in' mentioned refers to how the game fades in from black at the beginning of each playthrough and the phrase 'happily ever after' being the shorthand for an ending. The narrator knows it is just an endless cycle that he claims to watch for his amusement. While this more sadistic narrator doesn't really

appear in any other endings the Bomb ending's dark take on the material of the game suggests that perhaps the whole exercise of fiction in a game is structurally troubling. Designers have crafted games for us to play but in giving us possible actions, they have also given us the potential to ignore, subvert and reinterpret embedded right into the text itself. In the Bomb ending, we see the game respond rather dramatically to a desire to play *with* the game. The narrator considers the upset in the fiction here too great and kills the player just to spite their interference.

Yet the narrator does not succeed entirely in thwarting the player. Even though the bomb cannot be turned off, the player can still try. This ending offers more opportunity for play than the Life ending. The Bomb ending is a testament to the fact that even if a player is told that they cannot, play is the process by which they make-believe that they will. Arguably defiant players who try to activate the bomb may just be scripted or interpellated by previous games they have played, but the Bomb ending is at least ambiguous as to its possibility while still outright stating it is impossible.

The Bomb and Life endings complement each other well. They both deal with the issue of authorial control in a game and highlight Bogost's sentiment that games 'participate in the struggle between authorial intent and interpretive freedom' (Bogost, 2006, p.123). The Life ending in particular brings up the idea of struggle and the inherent resistibility of fiction in games as the player is restricted to watching a consistent but toothless narrative play out. Because fiction is not necessary for a game to be played then what compels us to comply with it? This is not to say that all fiction in games is something we desire to resist or ignore, but it does prompt us to ask why we don't resist or ignore it when and where it can be resisted or ignored. You are free to choose but your choices should line up with the intentions of the author.

The Life ending is mostly consistent but makes for a dull game. The Bomb ending is an interesting scenario but ultimately the narrator takes the players attempt to have some input in the story as an insult. Games are framed in a way that tells players that their input in the form of various choices matters. The idea of an authorial voice, vision or intent seems to run counter to this. As I've indicated before, if the narrator is able to be contradicted then surely they cannot be an author in the classical sense of the word. We may need an author that leaves room for the player to play their part. The Bomb ending makes this point clear as the player's resistance is effectively futile but makes for a more enigmatic and playful experience than the Life

ending because of the (admittedly false) promise that we can turn off the bomb. If authors in games must share the burden of storytelling with the player then what does it mean when one storyteller disagrees with another? A closer examination of the player's behaviour may shed light on dysnarrativa.

The Choice Ending - Contradiction and Compliance

Player choice is the primary mechanic of *The Stanley Parable*. Events happen because of choices made by the player such as which door to walk through or whether or not to press a button. The player will often be presented with a situation and be expected to act in a certain way that is appropriate to the game's fiction. This will continue happening until either the player restarts the game or reaches an ending where the game will usually restart itself.

Most players that choose to play *The Stanley Parable* will come across the following choice. After Stanley steps out of his office the narrator states that:

> *When Stanley came to a set of 2 open doors, he entered the door on his left.*

The player must then decide which of the two doors to walk through. Do they defy the narrator or go along with his story? Often players have similar choices to make in other games about whether to comply or contradict a game, although these choices are not usually so explicitly stated. *The Stanley Parable's* door choice highlights some aspects of design that are key to understanding the problem.

The narrator leaves both doors open when he clearly wants Stanley to walk through the left door. If he really wanted Stanley to walk through the left door then why are both doors open? In any case this is where many of our problems begin. Obviously *The Stanley Parable* requires that both doors be open so that we can explore how various choices interfere with the narrative of the game but this choice is offered to players frequently in other games albeit in different forms.

This predicament mirrors how designers would like players to do certain things in a game's fiction but have figuratively left an alternate door open (intentionally or not). In any game that presents both a fictional world and a player with the opportunity to interact with that world it seems that players will eventually find the 'right door'. Fictional worlds can be subverted by the player acting out of character, trying to find the edges of the playspace to break through them or completing the game in a way not intended by its designer. There always seems to be some way to contradict the

continuity of a game's fictional world even if all the player can do is walk in circles when presented with a corridor.

This is because most, if not all, games give the player some degree of agency. Arguably game designers would expect that the player do what is fictionally appropriate because they have been conditioned to intuitively know what is required of a conventional narrative (for example the protagonist does not ultimately fail or die outside of tragic fictions) and given context for their actions. Even some academic arguments are in favour of sidestepping dysnarrativa by advocating that players play in the way that is appropriate to their role in the game. Doing it in a way that acknowledges their real control over fictional happenings while buying into the fiction for its own sake.

In a discussion of how players struggle to approach a game as a consistent text, Brown observes:

> The problem of dissonance can be seen as the disconnection between Suits lusory attitude and its acceptance of rules and Coleridge's willing suspension of disbelief. Switching between the two is not enjoyable since you're frequently jolted from gamer, a potentially agentic position inside the text enabled through a willed disavowal of presence, to reader, a rather less agentic position outside of the text brought about through a process of textual interfacing. (Brown, 2013, p.210).

This tension between player agency and passivity is well-demonstrated by *The Stanley Parable* and is a common problem with many games. Brown suggests a solution in the form of a 'game-playing-role' (Brown, 2013, p.206) whereby the player takes on a role within the game that fits the fiction. Ideally this should be encouraged by a game but not all players will see eye-to-eye with any given case and designers can, perhaps unintentionally, make this more difficult.

In an example from *The Evil Within* (Tango Gameworks, 2014), the player-character must run down a hallway because they are being pursued by a large monster. In a sense this is a type of choice that relates not only to beating the game but also perpetuating the game's fiction. It could easily be said of a narrator within this game: 'When [the player-character] came to a hallway and was pursued by a large monster they ran for their life until they had escaped' (assuming this is the canon narrative). The 'right door' here is that the player may choose to do nothing and be savagely mauled by the monster thus upsetting the narrative trajectory (in this case a canon narrative in which the player character survives). In this particular case this is unlikely to happen as the player's goal in the game and the goal of the storyteller

here are the same: for the player character to survive. In *The Stanley Parable*, the door choice is primarily of significance to the game's story and has no significance in terms of a win state. In fact the player cannot win *The Stanley Parable* as it doesn't conclusively end. The player will not win or lose because of their choice and thus the incentive to obey the narrator becomes diminished. It is, perhaps, because of the narrator's statement about the left door that the player even considers the alternative door. While the narrator seems to know the story, the player can reason to themselves that because they have control of Stanley they can decide his fate.

In the Choice ending the player/Stanley reaches a room with a ringing telephone in it. The narrator claims that Stanley's estranged wife is on the other end and that he should pick up the phone to be romantically reunited with her. While not an explicitly stated alternative, the player is able to unplug the phone. Upon unplugging the phone, the narrator is astonished that the player was able to 'choose incorrectly'. He consults the script to try and explain this possibility and comes to a conclusion:

> *Not picking up the phone is actually somehow an incorrect course of action. How is that even possible? None of these decisions were supposed to mean anything! I don't understand. How on earth are you making meaningful choices? What did you- Wait a second, did I just see… no that's not possible. I can't believe it. How had I not noticed it sooner? You're not Stanley. You're a real person. I can't believe I was so mistaken. This is why you've been able to make correct and incorrect choices! And to think I've been letting you run around in this game for so long. If you'd made any more wrong choices, you might have negated it entirely.*

The narrator's surprise that you are a real person is a little odd at first. Leaving aside the fact that he seems to directly refer to the player in other endings without too much difficulty, the statement that the player is a 'real' person causes one to wonder what he considered Stanley to be originally. It is unclear at this point what has happened to Stanley, fictionally speaking, but the ending comes back to this later. The implication that a real person would be able to somehow choose incorrectly thus negating the game is also something that is understandably dangerous for the narrator. A real person can cause dysnarrativa by simply going against the script. This could mean that the narrator must tirelessly work to make sure that no player choice can lead to dysnarrativa. The narrator must always remain one step ahead. This scene is scripted for comedic effect but demonstrates how a designer's expectations about choice might not work out the way they intended. As a remedy the narrator suggests watching a short instructional video on how to make choices properly. The video is a mock public service announcement about choice:

Choice. It's the best part of being a real person. But if used incorrectly can also be the most dangerous. For example, in this scenario a hypothetical real person named Steven has a choice. He could spend years helping improve the quality of life for citizens of impoverished third world nations. Or he could systematically set fire to every orphan living in a thirty kilometre radius of his house. Which choice would you make? Remember that unlike here the real world makes sense and at no time should you make a choice that does not conform to rational logic. (See Fig. 1.4)

Figure 1.4 - Slide from *The Stanley Parable's* instructional video on choice depicting 'Steven's choice' by Galactic Cafe (2013).

The video continues in a similarly bizarre fashion but this extract highlights some key problems that face fiction in games. Choice, we are told, is a part of being a real person and we can also make choices that are wrong, dangerous or irrational. Steven's choice is emblematic of the absurdity of Stanley's choices and of choices in many games. Steven's choice to help third world citizens or murder orphans is laughably dualistic but is highly in-keeping with the unambiguous structures of games. Because of the necessity of limitations, abstract systems and rigid structures in games, creating opportunities for a player to express themselves through choices about the fictional world is very difficult and can often lead to dysnarrativa. Steven's choice is not attractive because of its inflexibility. It presents two options which do not allow for any other alternatives and yet a player, by the video's own admission, has the ability to choose freely, even if the choice is 'incorrect'. In a way the choice to unplug the phone was incorrect because it was not stated by the narrator. There are other cases, such as the Broom Closet ending

(discussed later), where a choice is not explicitly mentioned and causes the narrator to react negatively.

Meaning, in games such as *The Stanley Parable,* can be distorted because of how simplistic and artificial their structures are. The notion of a choice being incorrect is a clash of value systems. The rule of fiction says that a choice can only be correct if it fits the fiction, and the rules of a game say pretty much any choice is correct as long as it is legal. Legality and fictionality are not mutually exclusive but do not completely overlap either.

The video goes on to say that unlike 'here' (here presumably being the virtual world of a game) the real world makes sense and that our choices should only be informed by logic. This adherence to a sort of 'realism' is often something on the part of the player's interpretation that can cause dysnarrativa. Take the case of Stanley's legs not being visible when the player looks down. This isn't very realistic and to a sensitive player this could cause dysnarrativa. This sentiment is reflected in the Insanity Ending (discussed later) as Stanley's assumption that he is dreaming is because 'none of it made any logical sense'. What we mean by realistic or logical is perhaps that the world presented doesn't resemble the real one because it is inconsistent in some way. What we don't mean is that the virtual world of the game is an unsatisfactory attempt to create an exact replica of the real world; a perfect simulation. The real world makes sense insofar as you cannot 'break' the reality in the same way that you can break a procedural fictional world. The public service announcement Stanley watches does not adequately illustrate the difference between game context and real world context, and how choices in a game (or the real world for that matter) can be illogical. The relationship of logic and realism to dysnarrativa is perhaps close for some players as inconsistent fictions are often criticised for not being believable or realistic.

The appreciation of rational logic is understandable given the rigid structures of games as has been discussed before. Having to deduce from a limited set of options would surely prize logic as the most valuable tool when making choices in a game. Ironically the reality is that choices that relate to fictional worlds can be highly interpretable and players, that is to say real people, rarely make choices entirely governed by rational logic. Emotions, misunderstandings, political biases, personal preference, false perception and just plain doing something for the sake of it can all factor into any given decision-making process. The narrator fears the ability to choose 'incorrectly' as it is not constrained by common sense and is motivated by

forces the narrator and designer can't always control. As has been stated, incorrect choices tend to be ones the narrator or designers did not foresee. However, this does not stop the narrator from making an attempt to educate the player on what is expected of them and proceeds to let them try again with this new understanding of choice in hand. Unlike other endings the narrator does make an attempt here to tell the player about what they could be doing to improve their experience of the story.

After the video finishes the player appears back in the phone room where the game is apparently breaking down. Text and other props from the game are randomly strewn across the level giving the impression that the game is glitching (See Fig. 1.5).

Figure 1.5 - The Effects of 'Narrative Contradiction' on the world of *The Stanley Parable* by Galactic Cafe (2013).

Ah, welcome back. You may have noticed that this room has begun to deteriorate as a result of narrative contradiction. But not to worry. Now that you're properly informed on good decision making, we're going to revisit a choice you made a few minutes ago and see what the correct choice would've been.

The player is then guided back to the original door choice room. On the way, the player comes to the cargo lift which now has a barrier around it.

Now that we know your choices are meaningful, we can't have you jumping off the platform and dying! Imagine the main character dying senselessly halfway through the story. That story would make no sense at all

The narrator now parrots the rhetoric of the instructional video. He believes logic and realism are the only antidotes to dysnarrativa.

We just need to get you home as soon as possible before the narrative contradiction gets any worse. Unfortunately, it seems this place is not well-equipped to deal with reality.

Narrative contradiction is apparently something to be avoided by all parties as it dispels the illusion of a consistent world for the player and damages the authorial authority of the designer. Home in this context presumably means either reality (where the player actually resides) or the terminus of a series of correct choices. Back at the door choice room, the narrator explains that everything will be fine as long as the player 'correctly' chooses to go through the left door.

Now remember, all you need to do is behave exactly as Stanley would. That means choosing responsibly and always putting the story first.

Putting the story first is what we were doing in the Life Ending. At this point the right and left doors will lead to different endings one being the Choice (Compliance) ending and the other is the Choice (Contradiction) ending.

Choice (Contradiction branch)

Going through the right door causes the game world to deteriorate even further. To the narrator's horror the player has destroyed the game by ignoring fictional consistency. The world is now twisted and broken which provokes an angry response from the narrator.

Ugh! It's ruined! I can't believe after everything we talked about you… my story… you've destroyed my work! Why!? For what!? What did you get out of that? What did you think was so special about the game coming undone?

The narrator decides the best solution to such extreme dysnarrativa is to just eliminate the game. This is definitely a guaranteed way to avoid dysnarrativa but then we are also avoiding any kind of game at all. The game apparently shuts down and we are left in a dark broken room with the narrator's voice.

Now look where we are. My entire game is destroyed. It was the only thing in the world that was mine and you've run it into the ground. What, did you think that would be funny? You just had to see?

The narrator mourns at how hard he had worked on his story (summarised as being the same story as in the Life Ending) before the game cuts back to the door choice room where the player is free to explore the Compliance branch.

Obviously dysnarrativa is not so bad that it ruins a game forever beyond repair, as this ending suggests, but dysnarrativa can only be forgiven for so long. Both this and the Compliance branch lead to negative consequences and the narrator becoming angry at being unable to avoid any sort of contradiction. This ending appears to be quite fatalistic about the inevitability of dysnarrativa but I believe it is really serving to highlight the problems of having a 'real person' running around making 'incorrect choices'. In a sense there are incorrect choices that can be made by a player that would ruin the consistency of a world. Subversive play is all about this kind of action but it is not an invalid form of play. The trouble is that subversive play and fictional consistency involve goals that contradict one another, allegorised by Stanley and the narrator's conflict. The contradiction branch features an ending that is highly accusatory of player behaviour making it seem that dysnarrativa is just the player's fault. The compliance branch sees things differently

Choice (Compliance branch)

In this branch, when we are returned to the door choice room after unplugging the phone, we take the left door and the game appears to continue as normal. However, once we reach the boss' office we notice that the layout has changed. Like the original boss room, the narrator tells us there is a secret door out of the office. This time, instead of a panel of buttons the door is controlled by a voice receiver. As in similar paths he tells us the code for the door but this time it must be spoken aloud.

Stanley had been trained never to speak up, but now he would draw from within himself the courage to face the unknown. He drew a sharp breath, and then spoke the code.

The player has the ability to press buttons but not to speak aloud. Stanley is a silent protagonist and never speaks. Since the player is given no way of interacting with the voice receiver, an awkward silence prompts the narrator to restate the code.

Stanley spoke the code 'Night shark 1-1-5'. He spoke it into the receiver, right there on the wall

Still nothing.

Please speak the code into the receiver, otherwise we can't get on with the story. This is a crucial step

…

OK. Fine. You're not going to do it but you know what? It's pretty humiliating to bring you this far only for you to suddenly decide you have better things to do. I asked you for this one single thing, for your respect, the kind of respect Stanley shows for his choices. He knows what it means to take a story seriously. If you didn't want to see what I had to show you, then why did you come here!? You had a choice, you know, you could have gone through the door on the right! You could have done whatever the hell you wanted over there! Why did you come this way!? Speak! Say something to me! Explain yourself you coward!

The designers have not given us the ability to speak but they have also put us in conflict with the narrator who believes we are able to speak. Even if we wish to comply with the narrator we cannot. The cause of the dysnarrativa, a lack of a speech function, is exactly what makes the narrator so angry. Even though Stanley is fictionally established as a cowardly mute, the narrator is specifically implicating the player as *unwilling* to speak when really they are *unable* to. In some cases the design of a game can be self-thwarting through no direct fault of the player. Designers are responsible for representing their world to us, including the full range of action available to our character. However, there are cases where something is either overlooked or ignored because the rest of the game is functional enough. Asking a player to act in a way the game does not adequately allow (or believe a fiction that the fictional representation does not adequately allow) is to invite dysnarrativa.

As the contradiction ending judges the player to be the cause of dysnarrativa, the compliance ending implicates the designer. There are cases in which both, separately or collectively, are responsible for fictional breakdown. The relationship between the two is key in preventing many cases of dysnarrativa.[1] After the Narrator's rant the game cuts to black and the player is transported into the roof of the door choice room. Below them, Stanley can be seen being faced with the same door choice they have made so many times. However, Stanley is immobile and cannot be controlled by the player. Instead he stands eerily still as the narrator tries

[1] The narrator can be thought of as a stand-in or mediator for the designer of a game. Walton (1990, p.79-90) states that: "We might attribute the words of a novel [in such a genre] to a fictional narrator, a dramatic speaker, and at the same time regard the narrator as 'speaking for the author'". If this is so then the narrator has no reason to get upset at anyone but himself. It becomes clear here that the designer of a game (who here I refer to interchangeably as a game's author) must create situations in which their fiction is not imposed on a player. A player must be willing to engage and thus a designer's job may be to manipulate this willingness.

to coax a reaction out of him. Without a 'real person' to guide him Stanley is revealed to be an empty shell, a medium for the player. The narrator is distraught by Stanley's lack of action.

Stanley this is important. The story needs you. It needs you to make a decision. It cannot exist without you.

The narrator changes his earlier position that a correct choice exists and realises that the quality of the choice is nowhere near as important as the act of choosing. This after all is what drives any game forward.

Whatever choice you make is fine, they are both correct; you cannot be wrong here. We can work together; I'll accept whatever you do...

Do something! Anything. This is more important than you can ever know. I need this. The story needs it

If only the narrator had a player to hear him. His entire existence is dependent on somebody interacting with him. The narrator then resolves his own dysnarrativa at the fact that Stanley is not able to do anything by explaining that Stanley must just be taking some time to decide what is the right thing to do. Stanley never makes a decision because he can't and the game cuts to black and restarts.

This ending can be interpreted as being the 'true ending' of *The Stanley Parable* as it confronts the general ideas of dysnarrativa most directly and explicitly states 'The End' while the credits scroll over the final scene. It also apparently shows the player freed from the constraints of Stanley and the narrator's relationship having been ejected from Stanley's body. In this ending we have seen how player and designer choices can create dysnarrativa but also how they need each other for a game to exist. It seems dysnarrativa is a risk worth taking for the game to be a game at all. In this ending we are forced into a final choice between compliance and contradiction where the narrator blames us for ruining the game in both cases before realising that he needs the player for any story (not just his story) to work.

In the Choice ending the player is told to value realism and roleplaying in relation to fiction. Acting out of character or nonsensical events are targeted as causes of dysnarrativa in this ending. The problem here is a highly subjective interpretation of what is fictionally 'correct' with a focus on only making choices the narrator approves of. The narrator's failure to acknowledge his own accountability for causing dysnarrativa in the compliance branch is distracting. Humorously 'narrative contradiction' is depicted as the world literally corrupting and disintegrating but it seems to stem from both the subversive actions of the player and the actions of the

narrator. Whatever the case the game needs a player, and cooperative play between the player and designer would seem to be best practice to avoid dysnarrativa.

Imposition of an authorial voice can lead a player to wonder why they can't just do what they want and, if they are ludically unable to contradict an author, why they're even there to begin with. Games have relatively few limitations on what the audience can do when compared to other storytelling media (although they are still very much limited in their actions). Murray (1997, p. 20) has noted how literature is perceived to be a highly successful storytelling medium precisely because of its limitations. Readers cannot directly view their fictional world so they supplement many of its qualities by imagination. They cannot directly control the events of a literary narrative (although they can arguably read the pages of a book in different orders than are intended by the author but this arguably provides less pleasure than contradictory acts allowed by games and almost nobody does this anyway). They [readers of literature] can't do very much but enjoy and interpret the stories presented to them. Imposing these same limitations in a game (i.e. narrowing player agency) may allow for more coherent stories but it also makes for less coherent games.

Players do not escape blame, however, and the case as I have put it means that a game without an opportunity to subvert is scarcely a game. The goal of the designer with regards to dysnarrativa is to anticipate subversive play and gaps in their own design. To avoid comprehensively explaining everything except the points most likely to form the player's focus. The player must be subtly manipulated into making the 'correct choices' while feeling that they alone decided them. For the more exploratory player who wishes to break the fiction a counter-subversion is the best retort. Obviously a designer cannot reasonably respond to every query a player will make except in the simplest of games (which generally tend to have fairly limited fictions) but to ignore the need for answering uncommon questions is to reveal the game as fictionally defective. Player agency and choice is the means by which a game's fiction is often revealed. To ignore 'incorrect choices' or to impose choice is to invite dysnarrativa. However, if dysnarrativa is, to some degree, not absolutely avoidable are there cases where it can be used to help a game's fiction?

The Broom Closet Ending and The Insanity Ending

The player is capable of upsetting the experience, but does this really count as dysnarrativa? if a player's intent is to break fiction and they succeed, do they feel that they are disconnected from the fictional world? They may have disrupted the fictional consistency of a world but what of their experience as a player? Does it matter to certain types of players? A subversive player is one who plays with the intention to subvert meaning within a game, to break what has been put before them. While this may seem like an uncommon example we must remember that The Stanley Parable's design seems to invite this sort of play possibly on a commentary on the commonplaceness of player subversion.

Troublesome questions for fiction are raised by the fact that games require player input. It is difficult to talk of games as fictional works in a traditional sense because players also have a say in what happens, changing details as minute as the time taken to clear an area or the route they take around a room. Can a player be considered an author of the fiction? This question privileges fiction as a primary element of a game and yet there are those (Koster, 2004; Juul 2005) who suggest that fiction is potentially ignorable and not a definitive requirement for play. This puts the role of fiction in games in an awkward position.

On the way to Stanley's boss' office there is a broom closet. If the player enters and stays in the closet the narrator begins to try and deter the player from staying there. First he attempts to incorporate the closet into the narrative. Then he explains to Stanley there is nothing to do there and finally insults Stanley before coming to the conclusion that the player has died.

There was nothing here. No choice to make, no path to follow. No reason to still be here...

Stanley was fat and ugly and really really stupid. He probably only got the job because of a family connection, that's how stupid he is. That or with drug money. Also Stanley is addicted to drugs and hookers.

This ending is again only possible through the player's willful decision to end any action relating to the narrator's desired narrative to which the narrator responds in a hostile manner. The Broom Closet ending is framed as much more of a conflict between the narrator and the player (as opposed to Stanley). Since the narrator can't directly force the player out of the room he tries to convince the player to leave and continue on to 'the story'. He takes the player's inaction as an insult and responds with insults. In any other game this kind of action can create a passive dissonance where a player character's inaction can be perceived as a narrative discontinuity. Upon discovering the Broom Closet ending, entering it again in a

separate playthrough results in the narrator acknowledging the previous playthrough by despairing that the player would want to go back there again. Revisiting the broom closet a third time results in the broom closet being boarded up; a makeshift solution that eliminates an opportunity for play. The narrator also comments on the player's inaction if they stand still for too long at any other point in the game.

The player may enter the broom closet, not because it is fun or because they want to subvert the game, but simply because they can. The affordances allowed by games allow all sorts of diversions and digressions. While the fictional consistency of *The Stanley Parable* is interrupted by the broom closet interlude it is not the same phenomena as when a player is taken out of the experience due to a break in the fourth wall or the onset of disbelief. Their playing is not interrupted. It is certainly unusual for the narrator's story but it is not unusual for the game. The broom closet is there and the player may enter it without violating the rules of the game.

Dysnarrativa is not always a problem. Like Brecht's alienation effect (Brecht, 1964, p.91) or the reflexive aesthetic of postmodernism, dysnarrativa can be employed to achieve a specific feeling. Examples of this in games include *Metal Gear Solid*'s (Konami, Computer Entertainment Japan, 1998) self-referential nature (Brown, 2013), *Spec Ops: The Line's* (Yager Development, 2012) commentary on the unpleasant actions we perform in generic shooters (Keogh, 2012) and *The Stanley Parable* itself. *The Stanley Parable's* cases of dysnarrativa are usually employed to intertextually reference more general, problematic cases of dysnarrativa in other games for the sake of comedy. The Broom Closet ending is a particularly clear example as the decision to stay there is most obviously a dead end. The player staying there will probably do so just to see how long the narrator will continue talking. Likewise the repeated visits to the Broom Closet show a humorous fix of just boarding the closet up. Very rarely the Broom closet door will have a spelling error reading 'Boom closet'. Upon opening it the office explodes and Stanley dies. Absurdist humour is a natural partner of dysnarrativa as is horror fiction as we will see in the next ending. This has been noted by co-creator of *The Stanley Parable* William Pugh (2015) and game designer Zoe Quinn (2015) in her examination of how to design comedic games where she explains how horror and comedy pose a lot of the same design challenges for games. Dysnarrativa can cause one to feel the fiction is unintentionally funny or horrific and so it makes sense that it can also be purposefully employed to achieve the same result to emphasise, not break, fiction.

Insanity has often been a theme of fictional works that deal, reflexively, with their own medium. Horror is a good example where an incomplete explanation is used to heighten the tension of a text as it mirrors a sense of instability and fear, possibly even a feeling of going insane. It is also a convenient way of explaining away irrational or unexplainable phenomena in fiction that might prove inconsistent in a different context. If a character sees something which can't be real it makes more sense (or less dysnarrativa) to assume they are insane than the alternative, that the author is incompetent or that the representation is incomplete. Brown (2013) in discussion of the fourth wall in games notes that many horror games will use reflexive techniques in conjunction with a 'sanity meter' to indicate the player is in danger. Several games have used mental illness to emphasise metafictional aspects of games such as *Deadly Premonition* (2010, Access Games)*, Spec Ops: The Line* (Yager Development, 2012) and *Killer7* (Grasshopper Manufacture, 2005). It is fitting that *The Stanley Parable* has an ending dedicated to the idea that Stanley is insane as a way of accounting for the unusual things that happen to him. The Insanity ending can be reached by taking the first left door and going downstairs into the basement instead of going upstairs into the boss' office as the narrator suggests.

He considered the possibility of facing his boss, admitting he had left his post during work hours, he might be fired for that. And in such a competitive economy, why had he taken that risk? All because he believed that everyone had vanished? His boss would think he was crazy.

In this ending the narrator is generally represented as non-diegetic, simply narrating Stanley's inner thoughts and actions. He tells us that Stanley considers the possibility that he really is insane.

And as Stanley pondered this he began to make other strange observations. For example, why couldn't he see his feet when he looked down? Why did doors close automatically behind him wherever he went? And for that matter these rooms were starting to look pretty familiar, were they simply repeating?

Stanley's observations are all cases of mild dysnarrativa common to many games. Invisible feet are a fact in many first-person games since many designers perhaps assume that the player would not be interested in looking at their feet. Linear games often bar off the path the player came in order to push them forward and repeating level design can give the uncanny sense that the world is not real. While exploring the basement the player becomes trapped in a non-euclidean loop whereby they do cycle through the same rooms over and over again. To explain these bizarre events

Stanley exclaims that he is dreaming, another common explanation for impossible or contradictory events in fiction.

What a relief Stanley felt to have finally found an answer, an explanation

How Stanley deals with this problem is very similar to the process of resolving cognitive dissonance or confabulation. An explanation for nonrational events is what we crave, without it we feel fear or helplessness. The appeal of the horror movie, the unexplained and unseen, is exactly what we do not want in other types of fiction. Stanley is then narrated as taking advantage of his lucid state while dreaming, imagining himself to float through space which actually occurs in game.

It was so much fun, and Stanley marvelled that he had still not woken up. How was he remaining so lucid?

The game then breaks the diegetic barrier between Stanley and the narrator in a slightly more unsettling way than in other endings.

And then perhaps the strangest question of them all entered Stanley's head, one he was amazed he hadn't asked himself sooner: Why is there a voice in my head dictating everything I am doing and thinking? Now the voice was describing itself being considered by Stanley, who found it particularly strange. I'm dreaming about a voice describing me thinking about how it's describing my thoughts, he thought!

Oddly the narrator doesn't directly acknowledge to Stanley that he is being heard, he only describes Stanley's hearing him. This is in direct contrast to the narrator's usual eagerness to break the barrier between him and Stanley by holding one-sided conversations with him. What is perhaps more unsettling is that the connection between Stanley and the player is looser here than in other playthroughs. While the character Stanley and the player are both addressed by the narrator, often interchangeably, this ending almost never acknowledges player action, disguising it entirely in Stanley's soliloquising. As a result the player is left feeling more of a witness to Stanley's insanity rather than having a hand in it. In a way, this branch of the game seems the most fictionally consistent *if* we interpret Stanley as insane. Doubt begins to set in on Stanley as the narrator recounts: 'Was Stanley simply deceiving himself?' before outright stating 'Stanley is as awake right now as he's ever been in his life'. Stanley's 'explanations' are analogous for a player's encounters with dysnarrativa. An explanation is something we feel needs to happen.

Did the voice not see him float and make the magical stars just a moment ago? How else would the voice explain all that?

To prove that he is dreaming Stanley closes his eyes and the screen goes black. The narrator describes Stanley imagining himself to be in bed and upon waking up Stanley finds himself still in the basement.

Stanley began screaming.

Direct acknowledgment by a game of events that would cause dysnarrativa often produce comical or horrific results. This ending blurs the point even further by distancing both the narrator and player from Stanley; othering him. The need for everything to make sense can lead to dysnarrativa if we are to read fictions literally. Stanley cannot handle what is happening because for him it is a reality. This reality is perhaps one of the most fictionally consistent since Stanley makes very literal observations about unusual phenomena in the game.

"Please someone tell me I am real! I must be! Can anyone hear my voice?! Who am I? Who am I?" And everything went black

The narrator then recounts the story of a woman named Mariella who finds Stanley dead on the pavement. She considers Stanley's situation and makes an oddly specific observation:

I am sane. I am in control of my mind. I know what is real, and what isn't. It was comforting to think this and in a certain way, seeing this man made her feel better.

Mariella then leaves to go to work and the game restarts.

The insanity ending brings up the problem of the need for explanation. As I have mentioned, dysnarrativa is a term borrowed from diagnostics and describes a symptom of patients with Korsakoff's syndrome or Alzheimer's disease. Dysnarrativa is a form of retrograde amnesia, an inability to specifically recall autobiographical information which can understandably be distressing for those so afflicted. In Korsakoff's syndrome particularly, patients resort to a behaviour known as confabulation which McGilchrist explains as a reaction 'where the brain not being able to recall something, rather than admit to gap in its understanding, makes up something plausible, that appears consistent, to fill it' (McGilchrist, 2009, p.81). Patients might attempt to piece together a plausible autobiography from their immediate environment. For example a patient may see a picture of a fishing boat in their room and confabulate a life story themed around them having been a fisherman. To others this may appear as compulsive lying or simply the correct conclusion that the person is mentally ill. However, to the patient, what they are saying is earnestly believed (at least temporarily). 'Why else would I have a picture

of a fishing boat in my room?' they might ask. The alternative is that they realise that they have no clue what is happening to them.

While dysnarrativa is a serious affliction for patients with these mental illnesses, I believe it is a useful analogy to how we, as players, respond to fictional inconsistency. The insanity ending is a good example of how the game tries to comprehensively explain some things that are actually quite troubling when compared to our own reality. While it is reasonable to expect that the fictional world in a game does not clash with its rules and representations, it seems that dysnarrativa is not a problem that should be wiped out. If Stanley cannot handle relatively minor incongruencies in his surrounding environment then he will of course lose the plot, in a manner of speaking. Rather than keeping the illusion of the game's fiction alive, the narrator is actually the one who pushes Stanley into realising that there is no real explanation for his circumstances other than that he is insane.

Dysnarrativa is related to problems of representation and interpretation and the insanity ending shows how representation can lead to interpretations that cause dysnarrativa. Stanley's observations that he cannot see his feet, and so on, lead to the questionable conclusion that he is simply dreaming. Stanley's knowledge of the game is most in line with the player's in this ending. The story of Stanley being insane seems to lack any dysnarrativa at all for the player playing this ending, as everything that happens is adequately represented and explained (albeit by appealing to hallucination or insanity). It brings the player and player character's perceptions of the world together, reducing the chance that dysnarrativa will occur. Yet this ending exemplifies the 'get-out-of-jail free card' that is insanity. Insanity can be used to explain even the most egregious examples of the breakdown of fictional consistency. The solution to dysnarrativa it presents is tantamount to claiming all discrepancies in fiction are the result of the narrator's or character's perspective being distorted by mental illness or hallucination. Some fictional inconsistencies are criticised because of the way the fiction is framed but these same inconsistencies might be intentionally employed, as they are in the insanity ending and the broom closet ending, to critically explore the medium.

The Insanity ending deals with the resolution of a game and its fiction through the lens of insanity. While we can remain safely detached behind a fourth wall in traditional forms of storytelling, a game compels us to have a foot in the door to its world if we want to engage with its story. Conway (2009) suggests that the fourth

wall in games behaves like a modular boundary that is not as clear cut as it usually is in media such as theatre. Instead many of the cases Conway cites, he argues, actually further immersion into the fictional world of the game. Rather than redefining the parameters of the fourth wall, as Conway does, I'd suggest that in certain contexts it is helpful, perhaps even preferable, to deliberately cause dysnarrativa. In the Insanity ending we feel detached from Stanley's plight leading to a disturbing yet fictionally consistent explanation for the events surrounding him. Even when Stanley makes observations that would ordinarily cause dysnarrativa the frame of insanity and horror makes it all fictionally consistent albeit disorienting. Despite the fact that it is fictionally consistent this ending shows that horror is an excellent fit for games as in this case unpleasant dysnarrativa helps the fictional world rather than breaking it.

Much of *The Stanley Parable* uses dysnarrativa as a device for entertainment. The Broom Closet ending and the Insanity ending are particularly clear examples of this employing comedy and horror respectively to communicate the game's sensibilities. In the Broom Closet ending, the subversion by the player is so obviously a dead end that it is absurd even in the absurd world of *The Stanley Parable*. Immediately the narrator states there is no reason to remain in the broom closet as there is nothing to do. Baffled at the player's inaction the narrator resorts to mocking the player before assuming they have died. The Broom Closet ending is simultaneously comedic, abject and dull. Since dysnarrativa is so prevalent in games it would seem that they are prime territory for comedy or horror. We will return to this point later in the chapter.

The Confusion Ending and The Death Ending

In the previous subchapters we saw how games relate well to comedy and horror as they are two genres that traditionally benefit from dysnarrativa. We also saw how the relationship between the designer and a player's agency is fertile ground for dysnarrativa. One structural component of games often overlooked in how they relate to game fictions generally is the structure of what some designers refer to as the 'core loop' or 'loop' (Kelly, 2010; Katkoff, 2013; Guardiola, 2016) (not to be confused with the programming term 'game loop'). A core loop is an abstract concept that helps visualise the cycle of actions a player will enact in a game (See Fig. 1.6). A game may involve the player starting a level, defeating enemies in that level, defeating the boss enemy of that level and gaining rewards for completing the

level. The loop would then begin again for the next level and so on. Game designers find it a useful tool for determining the moment to moment focus of their game but it is also helpful in revealing something about the structure of games. All games can be characterised by one of two (or both) processes; repetition and failure.

Figure 1.6 - Diagrammatic Example of a Game Loop for *Marvel War of Heroes* (CyGames, 2012). by Katkoff, M (2013).

Obviously we endure these to an extent so that we can taste victory, fun and other rewards but it is surprising how much we fail and repeat actions in games. Jesper Juul noted this in his work *The Art of Failure* (2013), comparing the abundance of failure in games to the paradox of tragedy. He asks why we should endure failure (a typically negative feeling) but at the same time invite it as a necessity when playing a game. The repetitive undulation between failure and success is particularly compelling for any player but unfortunately this structure does not always translate well to fiction, at least not in the same way.

Repeating actions and failing to succeed are common in the playing of any game. Repetition is inherent in the player's playing. Video games limit actions to relatively few affordances for players. For instance a game may let a player jump, move and crouch. If the player can only do these things then they will be jumping, moving, crouching many times before the game's end. Games also have limited representational assets so a player is likely to eventually notice repetitive patterns in level design, enemy design, the nuances of mechanical interactions and so on. Repetition, while it may have some negative connotations in other areas of life

(particularly work), is somewhat necessary and useful in games. Through repetition players master skills, learn from failure and anticipate new events with the appropriate frame of mind for that game. Whether the game is skill or luck-based, failure through repetition is a necessary obstacle that improves the odds of a player continuing on. Unfortunately repetition (and by extension, failure) are very hard to account for fictionally. In reality, repetition does occur but not so much in fictional narratives (or at least not on a minute to minute scale). Often the bland repetitive minutia is edited out of novels, plays and films which focus their fictional representations to key scenes of action and development. In games the player does not desire for their time with the game to be edited down (assuming they enjoy playing it). An enjoyable activity makes for an easily repeated activity and thus the fiction cannot keep up with the demand to play again. Playing a game for the one-thousandth time may be the best time you ever played as you show what you've mastered. Watching a film for the one-thousandth time may be incredibly tedious and unlikely to surprise you.

Janet Murray (1997) has similarly observed that the structural requirements of games often conflict at a basic level with fiction. Narrative and game satisfaction are different and require different structures to be effective. Murray traces this to the nature of language use in games which tends to be instrumental rather than the imaginative language of fiction:

> Games seem on the face of it to be very different to stories and to offer opposing satisfactions. Stories do not require us to do anything except to pay attention as they are told. Games always involve some kind of activity and are often focused on the mastery of skills, whether the skill involves chess strategy or joystick twitching. Games generally use language only instrumentally ("checkmate," "ball four") rather than to convey the subtleties of description or to communicate complex emotions. They offer a schematized and purposely reductive vision of the world. Most of all, games are goal directed and structured around turn taking and score keeping. All of this would seem to have nothing to do with stories. (Murray, 1997, p.140)

To put it visually we can imagine the successes and failures of a player in a game cresting and troughing at regular intervals over relatively brief periods of time (represented by the purple line) (See Fig.1.7). The arc of a narrative, particularly a classical three act structure, sinks, rises and sinks (in unequal measure) before coming to a climax (represented by the red line). The intensity of the experience changes over time but for competing structures in the form of the game loop and the game fiction's pacing.

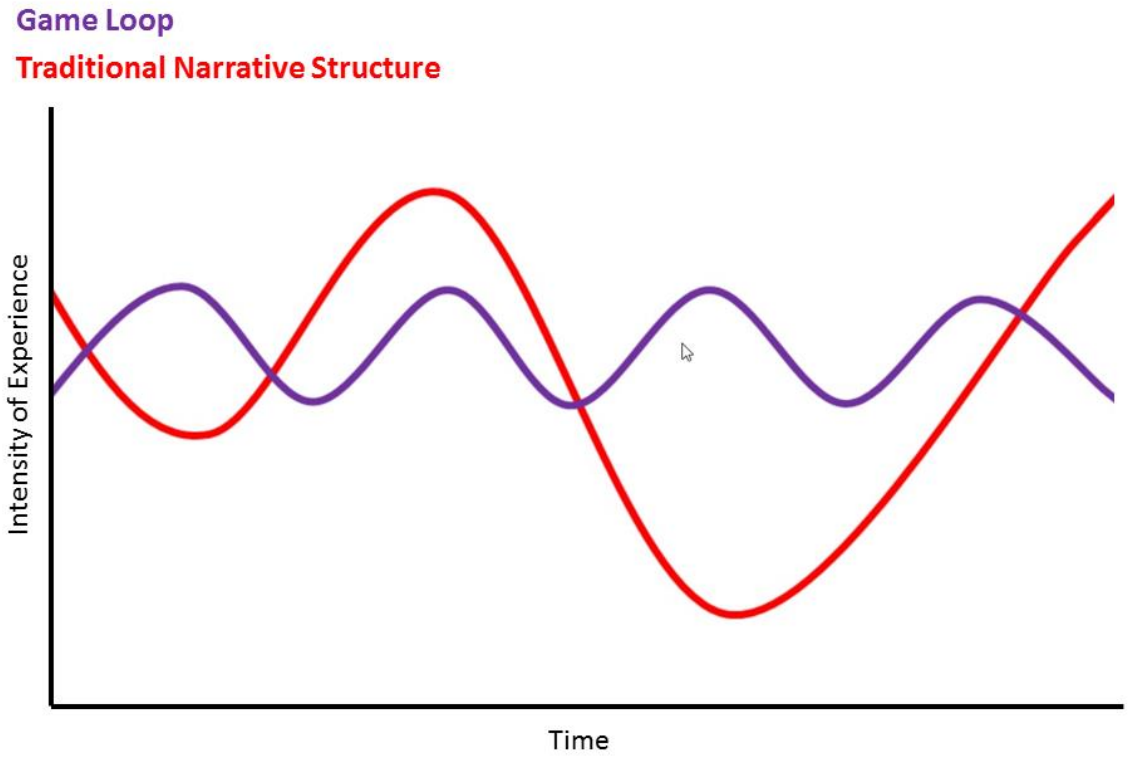

Figure 1.7 - Visual Representation of the Structural Difference Between Traditional Narrative Structure and Game Loop Structure. [Author's own image].

While a very simplified representation of game narrative structure, the above figure is intended to illustrate the idea that a game's repetitive patterns are not always matched by the pace of its fiction. Games also typically reward failure or success more frequently (often on a per minute basis) than the fiction they project. *The Stanley Parable* features a few endings that deal with this potential problem of integrating repetition and failure. In the confusion ending we come to the door choice and take the right door, turn left and take the service elevator, ignoring the narrator's request to get 'back on track'. The narrator becomes flustered and seems to lose track of where he was. He opens doors for you to enter and then closes them again after quickly realising they don't lead anywhere. This ending reflects the player's initial indecisiveness regarding complying with and defying the narrator. We start with a defiance (right door), then a compliance (left in the corridor from the lounge) and another defiance (taking the service elevator down). The game appears to read this as indecision. The narrator then finally finds the correct path but

unfortunately it leads to the monitor room, later seen in the ‘Life’ ending. The narrator states that this is a spoiler and decides to restart.

Who am I kidding? It’s all rubbish now the whole story completely unusable. How about rather than waste my time trying to salvage this nonsense we’ll just restart the game from the beginning. And this time suppose we don’t wander so far off track hmm. OK, from the top!

The game restarts. Upon restarting the player progresses back to the door choice room only to find that there are now six doors instead of two. After wandering around for about thirty seconds the narrator expresses dissatisfaction with the open-endedness of the maze Stanley is now in and suggests restarting again.

Do we need to restart the game again? Well I find it unlikely that we’ll ever progress by starting over and over again.

The game restarts. This time the door choice room now has no doors which causes the narrator to suggest going back which leads them to a derelict room that hasn’t appeared before. The narrator frustrated at not remembering what they were supposed to be doing simply exclaims ‘YOU WIN!!’ to the player in an attempt to end the game but is dissatisfied by the win being too easy.

The game restarts. This time the narrator has enlisted the help of ‘The Stanley Parable Adventure Line’, a large yellow line that has been drawn along the floor to guide the player to make sure they don’t get lost (See Fig. 1.8). The narrator claims that ‘The Line knows where the story is’ and the player now has no choice but to follow the line as any deviating paths lead back to the line or to dead-ends. While the player follows the line, the narrator begins a pseudo-philosophical dialogue about the nature of destination and existence. The narrator then plays loud, triumphant music ‘to lighten the mood’. The music is inappropriately adventurous as all the player does is walk down corridors as the line starts to deviate from the floor, randomly scattering and spiralling around walls and ceilings. Eventually the line leads the player back to the office, ending in the monitor room. The narrator curses the line and restarts the game again. Instead of following the line the narrator suggests exploring.

Figure 1.8 - The Beginning of '*The Stanley Parable* Adventure Line' by Galactic Cafe (2013).

Forget the adventure line what's it ever done for us, we're intelligent people right? Why can't we make up our own story? Something exciting, daring, mysterious. Ooh this all sound perfectly doable.

After exploring for a while the player comes across a room with two doors. The narrator determines that logically the right door should be chosen however both doors lead to the same room. This room contains nothing but a screen displaying a schedule of the confusion ending. It describes what has happened in each restart and what will happen in future restarts. The narrator then expresses frustration that he has no say in the structure of this ending. 'Who consulted me? Why don't I get to decide?'. He then refuses to restart the game despite the schedule stating that this will happen. 'Did we break the cycle?' The narrator starts up his discussion on the fact that this ending is still a type of story before being interrupted by a buzzer that restarts the game.

The Confusion ending seems to explore the idea of repetition and continuity in game narratives. Restarting a game has always been tricky to explain holistically as it simply cannot be rationalised fictionally unless we make some rather distracting conclusions. The implication of a continuous timeline between restarts in this ending is difficult to reconcile and, if this is the first ending the player encounters, it throws doubt on the continuity of the rest of the game. It is not just the repetition of restarting a game that can lead to an inconsistent fiction, repetitions occur at every

level of almost all games. Repeated dialogue, repeated animations, repeated level design, repeated employment of a dominant strategy, repeated character models, repeated assets, repeated traversal of the same space, much of these repetitions can lead to dysnarrativa by revealing the structural nature of a game. When inspecting something for the thousandth time, the seams start to show.

Another problem The Confusion ending raises is the design solution the narrator comes up with in the form of the adventure line. Linearity, literally represented by a giant yellow line, is something *The Stanley Parable* seems to consider an imperfect solution to the player getting lost. It temporarily gives the player the impression of discovery and adventure but eventually becomes a rote task. Limiting the potential for the player to get off track seems to correlate with the degree to which the game focuses on narrative. It may not be the line itself that is bad, only that it is visible to us in this case. Revealing too much about the structure of a game can be tantamount to breaking the fourth wall. It ruins the game and thus dispels the illusion of the fictional world. When a destination has been signposted for you then discovery becomes a case of following directions rather than discovery.

Linearity has been a difficult area for games. While many champion games' potential for open-ended play and decry the linear, it is often used in games where the fictional story is more structured or scripted. The problem of linearity is not the line as such but what it represents. The visible presence of the designer tugging on the player's leash. It is also unsatisfying because of where the line may end up. The adventure line is inflexible and as such can lead to greater dysnarrativa if the player decides that an alternate path would be more interesting or sensible.

Repetition is almost irreconcilable with fiction. While excellent for the practice and mastery of skills (as in a game) it couldn't be more detrimental to the craving for discovery and new perspectives that fiction so deftly provides for us. Dovey and Kennedy summarise the problem well: '...no other kind of cultural consumption requires this kind of repetition. Instead we find it in cultural activities where musicians or sports players are called upon time and again to repeat actions in order to achieve a preferred performance or a kind of virtuosity' (Dovey and Kennedy 2006, p.116). Repetition is only useful for practice and mastery, nowhere else does it interfere so strongly with fiction. Graeme Kirkpatrick discusses the meaning of repetition (and later death) in games and comes to similar conclusions about repetition's corrosive effect on fiction: 'Repetition is a defining feature of the video game which, as we have seen, constantly eats away at their capacity to tell

meaningful, self-consistent stories that live in the minds of players' (Kirkpatrick, 2011, p.186-7). And in a slightly more dramatic way of putting it, Kirkpatrick states that games are: 'Repetitive largely joyless routines punctuated by moments of frustration…' (2011, p.221).

Kirkpatrick tends to resist the idea that games can communicate meaning explicitly through either fiction or abstract mechanics. He likens it more to dance which doesn't communicate linguistically but nevertheless can have a significant emotional impact through how it is communicated. It is the player's performance rather than the game itself that is the content. While repetition certainly makes the fictional world-building difficult I wouldn't go so far as to discount any chance of union between the two. Repetition is characterised well by *The Stanley Parable* but it also brings to prominence the oddness of death in games. The Death ending is reached by jumping off of the cargo lift in the warehouse to the floor below, apparently killing Stanley. As the screen goes black, the narrator imparts some final words:

> *But in eagerness to prove that he is in control of the story and no one gets to tell him what to do, Stanley leapt from the platform and plunged to his death. Good job, Stanley. Everyone thinks you are very powerful.*

The issue of authorial control comes up again here. In a game a player can choose to end a story whenever they want by killing their character (provided the game allows the player to die). While this is technically true, it never really results in a particularly satisfying outcome. Suicide, outside of fiction, is often committed as an act of despair when one's waking life is as bad as or worse than dying which may relate to the narrator's sarcastic quip about Stanley feeling powerful. Having taken his life into his own hands rather than having it narrated Stanley resists authorial control but also resists any sort of continuity of his own story. Even more ironic is that killing himself doesn't free Stanley from the grip of *The Stanley Parable* and he will just wake up again in his office. The idea of player death is extended in the Space ending and the Choice ending where the idea of the player dying is seen as abhorrent and contrary to the needs of the game's fiction.

Death, in games, is commonly tied to a fail state and often is just a short setback and of no significance unless it is a fictional, and only fictional, death. Otherwise, as Tocci (2008) and Kirkpatrick (2011) have noted, death can become disruptive to fiction. In comparison to traditional tragic stories Kirkpatrick suggests video games come out unfavourably 'In tragedy proper the death of the hero is central. They embody a virtue that pitches them against destiny or fate and in showing their demise, the play offers an idea of transcendence' (Kirkpatrick, 2011, p.182).

Because Stanley dies so much in *The Stanley Parable* his death becomes tragic for a much more disturbing and existential reason. Death is mundane and lacks impact in *The Stanley Parable*. 'Death for video game characters is never fixed… This does not mean that the death was meaningless, only that the hero's life was meaningless' (Kirkpatrick, 2011, p.184).

Narratives that serve repetition and death well tend to be exceptions rather than the norm. They often take repetition as their primary theme as Murray has noted in the case of *Groundhog Day* (Harold Ramis, 1993) or *Rashomon* (Akira Kurosawa, 1950) (Murray, 1997, pp.30-31; p.36). Stanley is trapped much like Phil Connors in *Groundhog Day* and not even death can free them as both characters subversive attempts at suicide reveal a depressing immortality. Death for the player is either the result of failure or an attempt (by the player) to subvert the fiction. Fictionally it is not often a tragic event in games. There are cases in some games where a player character or other character will die permanently but again the repetitive aspects of play prompt us to ask the question of why the rules do not apply in these cases. A famous example is found in the game *Final Fantasy VII* (Square, 1998), which featrures one of the party members, Aeris, being killed off fictionally leading to that characters permanent removal from the playable roster of characters. The Final Fantasy series features an item, the phoenix down, that is able to resurrect characters after they have fallen on the battlefield. If all active party members are 'K.O.'d' then it's game over. Mechanically we might assume that all deaths in this fictional universe operate under similar laws but fictionally they appear to be separate. Unfortunately the game isn't clear on the specifics but fictional death versus ludic death is another example of dysnarrativa stemming from problems of representation. It's just in the case of games death is so common that, mechanically, it is routine and banal which leads to it, fictionally, lacking import. Aeris' death is jarring because it is permanent whereas other deaths up until that point are impermanent as the player can choose to retry after their party falls. The death is too ludically significant for some players that it contradicts the game's otherwise consistently routine representation of death.

We could, through specific interpretations, only focus on deaths that lead to ludic or fictional progression as Brown does: 'The valueless, constant death which characterises many videogames becomes rephrased through game-playing-roles as a reinforcement of the readings which do result in progression' (2013, p229). While valid as a strategy for coping with dysnarrativa this does gloss over alternatives that may be available to the designer in representing death and repetition that might

soften the rub of dysnarrativa as Kirkpatrick reminds us: ‘In traditional games a player’s failure might have resulted in being told to ‘miss a turn’ or ‘go back to Start’. These options were and are available to the video game designer too; nothing in the formal concept of progression, for example, necessitates this use of metaphoric death to punctuate the rhythms of play’ (2011, p. 182).

Some designers might try and integrate death into the narrative by that featuring multiple player characters that will permanently die while the game continues (as in *Heavy Rain* (Quantic Dream, 2010) or rogue-likes such as *Rogue Legacy* (Cellar Door Games, 2013) or *Tokyo Jungle* (Crispy’s, 2012)) or they can present a world that fantastically depicts death, resurrection and the resetting of time itself as regular occurrences (examples include *Dark Souls* (From Software, 2011), *Prince of Persia: The Sands of Time* (Ubisoft Montreal, 2003) and *Undertale* (Toby Fox, 2015)). In any case, failure in a game must always be examined when maintaining a consistent fiction. Even in cases such as *Dear Esther* (The Chinese Room, 2012) or *Gone Home* (Fullbright, 2013), where the player can’t technically fail as no fail-state exists, there can still be an unusual feeling when a game does not acknowledge a player becoming stuck or puzzled for a certain length of time. If death and repetition are such large obstacles to telling consistent fictions in games then this would seem to restrict the types of consistent fictions that can be told. I will return to this point in Chapter 3.

The Confusion ending and Death ending show how repetition and failure can interfere with fiction. Repetition tends to reveal the artifice of a game’s fiction and yet it is inevitable, even desirable, for a game to be repetitious. Fail states in games are usually attached to the fictional referent of defeat or death of a player character. While it makes sense that a character dies if the player fails, fictionally there is rarely an account for the fact that they just revive or why the death does not constitute a canon ending. Stanley dies in several of the endings yet always seems to end up back in his office. How this happens is unclear although it is implied that the narrator, disturbingly, is able to bring Stanley back.

In the Confusion ending the repetition is intentionally played out to the point where it is difficult to ‘unsee’ the fact that the player must walk down the same levels in subsequent playthroughs but with subtle differences. The Adventure line also very clearly reveals the artifice of a scripted path. This repetition was intended by the developers in order to make the game appear more continuous over multiple playthroughs (Pugh, 2015). Repetition and failure are difficult to gel with fiction in a

consistent way. The fact that the player kills hundreds if not thousands of enemies and perform the same limited set of actions over and over is not often a cause for concern but it does tend to reveal the rules of a game through its fiction. Performing the same difficult section in a game over and over is more likely to have us engage with a game's mechanics than its fictional details.

The Escape Pod Ending and The Serious Ending

The last endings I will discuss focus on the problems presented by one of the sharpest breaks in fiction - the breaking of the game itself. The Escape Pod ending is reached in the following way. Upon arriving at the boss' office, the player must enter the door to the office but run back through it while it automatically closes. Upon doing this the narrator suddenly stops speaking and the player is apparently free to wander back to the beginning. Upon arriving at Stanley's office a new door is opened that leads the way up a long stairwell to an escape pod. Upon stepping into the escape pod the screen goes black and a white strip of light can be seen at the bottom of the screen. After this the game restarts.

The ending concerns escape, a common theme in many of the other endings but for some reason it doesn't actually show or cause Stanley to escape his world. In fact it seems as if something goes wrong with the game upon stepping into the pod. Closer examination of a poster (See Fig. 1.9) in the stairwell to the escape pod reveals that 'BOTH THE NARRATOR AND THE PLAYER MUST BE PRESENT IN ORDER FOR ESCAPE SEQUENCE TO PLAY OUT AS INTENDED. DO NOT PROCEED...'. Since the narrator has apparently been locked in the boss' office thanks to the player's jump back through the closing door, this ending is unplayable. There is no way to include the narrator in the ending.

Figure 1.9 - The Escape Pod Launch Bay Poster (Raw Image File) from *The Stanley Parable* by Galactic Cafe (2013).

What is also interesting about this ending as a case of dysnarrativa is that the poster doesn't refer to Stanley, it refers to the player's presence. It also refers to an intention for the ending to play out correctly. Presumably, fictionally speaking, the designer 'intended' for the ending to play out with both the player and narrator present but of course it is designed as an elaborate metafictional joke. The poster is simply pointing out that dysnarrativa is sometimes a case of thwarted intent as has been discussed previously. The designer intended for something but the game's rules allow for the player to exploit them and divert from the intended result. There is no way to correctly play this ending as it is commenting on the dysnarrativa caused by the game itself becoming inconsistent mechanically rather than fictionally.

This ending is quite difficult to find as it is, requiring the player to perform a tricky bit of timing to break the game's sequence thus mimicking glitches and easter eggs in other games where an unintended or unfinished part of the game is discovered through ingenious subversion of the game's rules. These cases are not usually drawn attention to as examples of fictional inconsistency as they are superceded by the game itself becoming inconsistent. Nevertheless it is important to include these examples as cases of dysnarrativa to show that fiction is somewhat dependent on the game's rules not just the fictional statements and depictions a game presents us with.

It can also be another case of mistake or oversight on the part of the designer. One example can be seen in the game *Civilization* (MPS Labs, 1991). In the game players play as various historical figures who must build up a civilisation from early settlements to a modern empire. The historical figures possessed stats governing their behaviour and were attuned to be somewhat historically accurate. In the game the leader for India was Mohandas K. Gandhi, historically famous for his pacifism and advocation of non-violent means of disobedience. In *Civilization,* Gandhi's aggression rating was the lowest possible at '1' meaning that he would be unlikely to provoke military action. However when a civilization adopts democracy as a practice their aggression is lowered by two points. Because of a quirk in the code of Civilization, Gandhi's aggression rating was lowered by 2 when he became democratic but this was not expressed as '-1' as the system did not deal with negative numbers. Instead the character's aggression rating reset to the other end of the range of values giving Gandhi one of the highest aggression ratings in the game (around 255) (Plunkett 2016). While originally this bug became a source of dysnarrativa it is now a fondly remembered joke amongst *Civilization* players and is even replicated in later versions of *Civilization* as an homage to the bug (another case of dysnarrativa being employed to emphasise humour).[2] In any case it is clear how material problems like this can cause dysnarrativa.

The Serious ending involves an attempt to cheat the game. It can be reached by accessing the developer console upon launching the game and typing 'sv_cheats 1' into the console window. Upon doing this the player is teleported to 'the serious room' a locked room with a table where the narrator confronts the player on their attempt to cheat.

> *You just tried to activate "server cheats" which of course runs the risk of breaking the entire game. You've got no respect for the strict order of scripted narrative events and I just can't have that.*

He then sentences the player to 'a million billion years' in the serious room to think about what they've done. Cheating is something that designers are unable to agree on. Some relish the creativity of players in breaking the game in this way(in cases where a desirable or interesting feature unitentionally emerges) while others feel it ruins their game. Warren Spector, designer of *Deus Ex* (Ion Storm, 2000), was infamously excited by the unintended use of a glitch involving an in-game item to

[2] For further evidence of the effect of unintended material problems interfering with fiction these two videos (Gamebreaker, 2014; ZeroXGaming, 2014) show a fictional moment being compromised by a glitch in *The Wolf Among Us* (Telltale Games, 2014) and *Assassin's Creed Unity* (Ubisoft Montreal, 2014) respectively.

reach areas players were not intended to be able to reach (McGuire & Jenkins, 2008, p.17). Similarly the producer of fighting game *Street Fighter II: The World Warrior* (Capcom, 1991), Noritaka Funamizu, discovered a bug that allowed players to cancel from one attack to another via a very precise input timing. This was not originally intended but was left in as Funamizu believed it would be too difficult for players to consistently achieve anyway. Players quickly picked up on the bug which led to a new combo system that is still replicated in fighting games to this day (Drake, 2016).

The narrator's objection to the player's cheating is specifically to do with how it tampers with a determined path for the player. While the player can subvert the narrator in the regular course of play, this ending seems to suggest that that is fine as long as the player is not actively cheating the game. Cheating is to ignore the spirit of the game. Even though arguably this ending is just another choice for the player to make, it's message is that upsetting the order of a game through deliberate cheating will of course cause dysnarrativa but in a much deeper way. Rather than the fictional consistency collapsing because of inadvertent action on the part of the player or a misrepresentation by a designer, it is caused by the willful disobedience of the player to not only decide to subvert the game but to do so by changing the very rules of that specific game.

In a way these case studies could be seen to argue that a game's rules are structurally more important than fiction because this type of rule breakdown naturally affects fiction and can even happen in a game with no fiction whatsoever. A player will not usually defy a game's rules as freely as they might defy its fiction. To defy rules is to cheat, to defy fiction is to subvert. In the game of *Twister* (Milton Bradley Company, 1966), players are told to put their left or right hands or feet on different coloured circles on a mat as randomly dictated by a spinner. While they are being told to do something by the game, it is a different kind of being told to do something than in *The Stanley Parable*. If I defy an order to put my right hand on red because I do not want to (not because I cannot) in *Twister*, then the game no longer functions. If I defy an order to go through the left door in *The Stanley Parable* then I am making a choice which the game's rules accommodate but its fictional consistency may not. *Twister's* rules are obeyed not because it makes for a more coherent fictional world (*Twister* has no obvious fictional world) it is done for the game's own sake.

All of these endings have a running theme of collapsed function. None of these endings continue any sort of 'story' for Stanley. Instead the narrator turns his attention to the player's game breaking activity or is completely absent. This kind of dysnarrativa is difficult to account for and solve as it relies on rigorous testing of the technologies involved in making a game as well as the hope that a player will not gain access to the same tools as the one that made the game (although the latter is often unavoidable). The failure of a game to function at a technical level and the direct violation of its rules can result in a kind of dysnarrativa that seems external to the game itself. While the 'author', the player and even the structural nature of games can cause dysnarrativa, we can see that even the hardware and software the game is built on can potentially work against fiction by undermining the game itself. Cheating can be seen as another form of subversive play, this time subversion of the rules rather than the fiction. Subverting the rules and materials of a game causes a sort of dysnarrativa by proxy. Game inconsistency is not, but naturally creates, immediate fictional inconsistency.

Conclusion

In writing about fictional inconsistency in games it became clear very quickly that no adequate term exists for the phenomenon I aim to discuss. I have chosen to define the phenomenon by borrowing a term from neuroscience, dysnarrativa, that I will defend here. While I do not normally like inventing a term where language may already provide an adequate stand-in, the necessary borrowing of the term will hopefully become clear in this context through my argument. The definition I ascribe to dysnarrativa is as follows: *Dysnarrativa is the subjective phenomenological experience, by an audience, that a fictional world feels inconsistent in an aesthetically defective way.* Ludic Dysnarrativa describes dysnarrativa that occurs for the fictional world of a game.

Dysnarrativa is similar to the term 'ludonarrative dissonance', discussed and first coined by Clint Hocking (2007) in his analysis of *Bioshock*. Ludonarrative dissonance is perhaps the most widely used term in game studies that is closest in meaning to dysnarrativa. While dysnarrativa and ludonarrative dissonance are similar concepts they cover a different range of phenomena and I suggest that dysnarrativa is more useful for this discussion. Ludonarrative dissonance is usually described as the gameplay of a game and its narrative thematically contradicting each other and has been given other names in an attempt to redefine what exactly

happens in various cases. A few examples include ‘rupture’ by Chris Bateman (2015), ‘incoherence’ by Lana Polansky (2015) and Jason Tocci (2008), *The Stanley Parable*’s own ‘narrative contradiction’, and ‘mismatching’ by Jesper Juul (2005) (although the latter predates the coining of ludonarrative dissonance). Hocking (2007) writes:

> To cut straight to the heart of it, Bioshock seems to suffer from a powerful dissonance between what it is about as a game, and what it is about as a story. By throwing the narrative and ludic elements of the work into opposition, the game seems to openly mock the player for having believed in the fiction of the game at all. The leveraging of the game’s narrative structure against its ludic structure all but destroys the player’s ability to feel connected to either, forcing the player to either abandon the game in protest (which I almost did) or simply accept that the game cannot be enjoyed as both a game and a story, and to then finish it for the mere sake of finishing it.

Hocking’s issue is in a conflict between what he terms the ‘ludic and narrative contracts’. The original use of the term ludonarrative dissonance was in criticism of Bioshock’s apparent thematic clash. The game portrays a world in such a way that it aims to (by way of fiction) critique the excesses of objectivism but rewards the player if they choose to become, ludically, more powerful by being as opportunistic, and amoral as possible. Specifically Hocking (2007) determines: *‘*In the game’s mechanics, I am offered the freedom to choose to adopt an Objectivist approach, but I also have the freedom to reject that approach and to rescue the Little Sisters, even though it is not in my own (net) best interest to do so (even over time according to this fascinating data).*’* Hocking’s freedom as a player to contradict, thematically, the game’s message through his own action is what leads to the game’s inconsistency.

Ludonarrative dissonance is used inconsistently by various authors in different ways including to refer to thematic discord (as in Hocking’s original definition), as a criticism of unrealistically violent videogames, to criticise common game tropes and champion a vaguely-implied definition of realism. The term doesn’t really have a universal definition that can be seen in the many instances it is employed and is unfortunately less helpful because of this (Hocking, 2007; Juster, 2009; Swain 2010; Makedonski, 2012; Sawrey, 2013; Yang, 2013; Suellentrop 2016).[3]

[3] To further illustrate this, a collection of examples of what I would term dysnarrativa can be found on the website tvtropes.org (a wiki that collects various types of tropes and common devices of fictional works, edited by site members) where the phenomenon is listed as ‘gameplay and story segregation’ (tvtropes.org, 2016). Not everything in this list comes under Hocking’s definition which focuses on thematic clashes. In fact very few can be said to be problems arising from the theme of a game’s narrative clashing with the theme of the

The reason that some designers such as Druckmann (Suellentrop, 2016) or Yang (2013) might have reason to doubt that ludonarrative dissonance/dysnarrativa exists or is even a problem is most likely to do with how it is a subjective experience. What is upsetting for one person can be confabulated by another. Ludonarrative dissonance in any case may as well just be called dissonance if we are to understand games as holistic works in which fiction and narrative are a part. What dysnarrativa refers to is not only these types of thematic clashes but also problems of fictional inconsistency or misrepresentation. Game designer Jonathan Blow, in an interview with Time magazine (Peckham, 2016), admits that games face problems relating to fictional inconsistency but also criticises the unnecessary specificity of the term ludonarrative dissonance:

> The thing about the term ludonarrative dissonance is it's overly specific. It makes it seem like this is something peculiar to games, when in reality, you can more broadly look at any work of art or even things that aren't art and see when they're being hypocritical or self-defeating or inconsistent. These are much easier words for people to understand, that mean the same thing and that are not peculiar to games. (Peckham, 2016).

As Blow articulates, ludonarrative dissonance is too specific.Bogost (2006) has argued that procedural rhetoric in games means that a game's rules can convey a political message as well as its fictional representation and while these may clash it can be argued that the game, as a work, is internally inconsistent rather than it's gameplay and story separately contradicting each other. There is no reason that one can't refer to Hocking's example as simply dissonance unless one wanted to emphasise and categorise a difference between gameplay and narrative. Dysnarrativa is a catchall term that refers to the experience of any disruptive fictional inconsistency and ludic dysnarrativa specifically refers to those experienced in games. Dysnarrativa was defined as a means of starting the discussion from scratch with the hope that it might be refined along the way into something that may be of more use than the more confused usage and inherently dualistic implications of ludonarrative dissonance as a term.

The term dysnarrativa is meant as a solution to this problem of a lack of a defined term when dealing with fictional phenomena in games (and other media). It is an umbrella term under which many of the problems of fiction in games can be gathered under for the sake of their discussion and with the goal of a refined language for them. The problem is mainly with the representation of rules and

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gameplay. Many are simply logical contradictions or inconsistencies between a fictional depiction and a game mechanic and some are simply plotholes.

fictional worlds and dysnarrativa is the feeling that there is a break in this representation which can be, but is not limited to, a thematic clash such as those covered in Hocking's example of ludonarrative dissonance. There hasn't really been any extensive work to categorically define ludonarrative dissonance as a term and it isn't clear that ludonarrative dissonance is separate from dissonance in other storytelling media simply because gameplay is a factor in games.

It is also worth a quick comment on the etymology of the term dysnarrativa. Dysnarrativa is not so much concerned with the narrative being in conflict with the gameplay as it is with something being fictionally inconsistent. While the 'narrativa' part of the word etymologically indicates narrative, I suggest that it is not so much concerned with narrative storytelling as it is with the continuous and consistent experience of events.[4] Dysnarrativa is a more comprehensive name for the various phenomena that ludonarrative dissonance does not adequately cover by itself. Ludonarrative dissonance also implies that narrative and gameplay are separate and clash with one another, whereas dysnarrativa allows for discussion of internally conflicted, but otherwise whole, games. Fiction is a part of a whole that is the game. Ludonarrative dissonance can potentially perpetuate a dualism that game studies has suffered from between ludology and narratology (a conflict itself that some doubt ever even existed) (Frasca, 2003; Pearce, 2005; Aarseth, 2014). Dysnarrativa not only sidesteps this dualism but allows for a foundation in an approach to resolving the various problems of fiction in games.

I first came across the word 'dysnarrativa' in a book by Jerome Bruner, where its original meaning as a symptom of Korsakoff's syndrome or other memory impairments captured my attention: 'A neurological disorder called dysnarrativa, a severe impairment in the ability to tell stories, is associated with neuropathies like Korsakoff's syndrome and Alzheimer's Disease' (2002, p.86). One case is outlined by neuroscientist Oliver Sacks:

> Mr. Thompson, another profoundly amnesic patient I knew, dealt with his abysses of amnesia by fluent confabulations. He was wholly immersed in his quick-fire inventions and had no insight into what was happening; so far as he was concerned, there was nothing the matter. He would confidently identify or misidentify me as a friend of his, a customer in his delicatessen, a kosher butcher, another doctor - as a dozen different people in the course of a few minutes. This sort of confabulation was not one of conscious fabrication. It was, rather, a strategy, a desperate attempt - unconscious and almost automatic - to provide a sort of continuity, a narrative continuity, when

[4] Narrative comes from either 'narrare' (to tell/telling) or 'gnarus' (knowing in some particular way) (Bruner, 2002, p.27)

> memory, and thus experience, was being snatched away at every instant (2007, p190).

The similarities to the process that attempts to resolve fictional inconsistencies in games was hard to ignore.

Since dysnarrativa is more of a subjective feeling the player experiences rather than an objective problem with the game's fiction it made sense to model the term on something that describes a specific disruptive experience. Having said that, I must point out that the way in which I have used the term so far has been fairly fluid. Sometimes I use it to refer to the problem generally, in other cases I make specific reference to an event in a game causing dysnarrativa in the player or the game possessing dysnarrativa. In importing the term, one of the primary goals was to create a term from which to anchor the discussion. As a result I perhaps use one term in multiple contexts where multiple, more vague terms would be used instead. Whether this leads to a more coherent discussion or not is debatable but I believe that it focuses the discussion more clearly around a single goal; the reduction of fictional inconsistency (i.e. dysnarrativa) in games. The 'ludic' in ludic dysnarrativa (featured in the title of this thesis) is used only as a qualifier as the term dysnarrativa can be appled to any medium that represents a fictional world. For example, theatrical dysnarrativa, literary dysnarrativa, operatic dysnarrativa, televisual dysnarrativa etc. I have used the short form dysnarrativa throughout this thesis to commonly refer to ludic dysnarrativa as this is the focus for this research.

Many have attempted to put a comprehensive term to the phenomenon and Blow is quite right in stating that simpler, less esoteric language would benefit the general discussion of games enormously (Peckham, 2016). I must acknowledge at this point that dysnarrativa is only a useful term insofar as this thesis requires an anchored word to refer back to in the absence of any adequate universal term. Outside of this thesis I do not expect dysnarrativa to penetrate common or even academic vocabularies. I must strongly emphasise that it is only useful in the context of a deep theoretical discussion that frames the problem of fictional inconsistency as a disruptive feeling in the audience brought about by aesthetic problems. I preferred to use a term that already exists in English but I am aware that dysnarrativa is not commonly used. It is not game specific, has a useful etymological root and avoids the dualism inherently implied in the word 'ludonarrative' but I must admit that it is still esoteric jargon. Yet it is esoteric jargon that has been coined out of necessity as no word of specific enough meaning exists in English that describes fictional inconsistency across all media.

The Branches of Dysnarrativa

From examining the endings of *The Stanley Parable*, some commonalities have appeared that would indicate a number of explanatory causes of dysnarrativa. In order to move forward I will conclude this chapter by highlighting each of them so that work can begin on discovering a way to reduce dysnarrativa's persistent presence.

The first category is problems relating to the people who create and play games. Some cases of dysnarrativa stem from mistakes, expectations and subversions by the game's designer or its player. The problem of authorial intent seems to clash strongly with certain aspects of play which in turn leads to the other extreme where player subversion goes so far outside of what is logically permissible by the game's fiction that their own action, intentionally or otherwise, causes dysnarrativa. In any case player agency, and the lack of accounting for that agency by the designer, is one way in which dysnarrativa manifests itself.

Playing a game can be thought of as akin to holding a conversation with the designer and player as two parties. However, the conversation is held in a very indirect way. The designer has essentially put all of their queries and responses into play ahead of time and so can only engage in that conversation from a predictive standpoint. They attempt to guess what a player is likely to do and account as best they can for the player's own queries. The player may converse as normal and thus the problems begin. They may be quite 'polite' and assume Brown's 'game-playing-role', going along with the conversation quite happily. They may lack the understanding required to have the conversation the designer has started thus leaving the dialogue at an impasse. If a designer holds too one-sided a conversation (as in the Life ending) the player may finding themselves wondering why they are even there or feeling a need to subvert the game (resulting in something similar to the Bomb ending). In the most severe cases of dysnarrativa, the designer has not adequately provided for a responsive conversation in advance or the player feels like it is too easy to accidentally provoke a query that has no response (as is the case in the Choice ending when the player chooses 'incorrectly'). Agency must be accounted for and subtly guided by the designer if the player is not to resent their presence. Else it becomes one of the most fertile grounds for dysnarrativa. (I will return to case studies (such as *Dungeons and Dragons* (Gygax and Arneson, 1974)) where the designer has a reactive role in play later in the thesis).

The second category consists of structural qualities that games naturally feature; specifically repetition and failure. The mundane repetition of everyday life is something that games reflect quite well due to the fact that games often present their worlds through temporally continuous stretches of time (i.e. time in a given play session plays out in 'real-time', it is infrequent for jumpcuts or omissions to be made). Barlow (2016) and Grodal (2003, p.148) have both noted how this mechanical repetition causes a game to be perceived as mundane or repetitive and how this jars with traditional storytelling which omits many mundane or uninteresting details made prominent by repetition. The prevalence of repetitive action and failure in games is difficult to account for fictionally. The abstract reduction of systems that are simulated by games makes for rigid and simplistic scenarios that have a hard time meshing with more complex or ambiguous fictions (Steven's choice in the Choice ending is a prime example of this). It is this abstract reduction of systems that leads to games feeling repetitive as we are exposed to their systems and mechanics again and again as tests of mastery. The potential limits of the player are limited to some degree in every game since the rules must state what it is and isn't possible for the player to do. Fiction, however, has no such necessary constraints. When the fiction misaligns from what is ludically possible then dysnarrativa can occur. Repeating the same actions over and over across a comparatively less repetitive and more diverse fiction will, over time, increase the likelihood of this process happening (as in the Confusion ending) and the gaps in the fiction becoming more likely to reveal themselves. The possibility of failure is the cherry on top as failure requires the repetition of a failed section, increasing the amount of repetition in a game.

Failure also poses a challenge to how a game is read. If a player fails for a reason they feel is fictionally implausible (for instance a powerful player-controlled character is mortally felled by an enemy grazing their finger) then dysnarrativa may occur. If they fail because the game imposes a fictional restraint that the player disagrees with (for instance a player reaches a failure state because a non-player character feels they didn't achieve an objective to a sufficient level of quality, for example under an arbitrary time limit) then dysnarrativa may occur. *The Stanley Parable* presents Stanley's failures as part of a horrific and confused continuity whereby Stanley dies over and over, doomed to repeat the narrator's gauntlet of choices forever. Failure is the point at which the need for ludic stakes interrupts fictional traversal. Repetition simply reiterates the problem for players, reinforcing a cyclical

relationship between repetition and failure. As Kirkpatrick puts it ‘Death is the point of contact between form/rhythm and meaning in video games’(2011, p.162).

The third category relates to the material makeup of a game. It could be said that there are two types of ‘material’ that make up a game. First there is the physical hardware and tools that represent a game: the code in a video game, the console that runs that code, the playing pieces and boards of board games, everything that maintains the game physically *et cetera*. Second there is the conceptual legality of the game’s rules which exist only as ideas that are voluntarily obeyed by players. Both of these materials can be distorted by cheating, hacking, software glitches, a power outage, a player not knowing all rules or a game featuring an inconsistent ruleset. While these ‘material problems’ will inevitably lead to dysnarrativa they also upset the very fabric of games themselves.

This presents the interesting suggestion that fictional inconsistency is somewhat subservient to ludic inconsistency. In the Serious ending, cheating not only constitutes an end to the fiction of *The Stanley Parable*, it consists of an end to playing *The Stanley Parable* altogether. Material problems can also, therefore, affect games which have no apparent fictional world. As demonstrated in the example of *Twister*, it still suffers from the problems of cheating even though there is no apparent fiction to disrupt. The game being disrupted will naturally disrupt the fiction. As a result this branch of dysnarrativa is perhaps less relevant to discuss as ludic inconsistency is usually the privileged concern in these cases. However, glitches and other material upsets that could arguably be said to be the responsibility of designers may come under the first category of dysnarrativa as they represent fictions that apparently disrupt themselves (as in the Escape Pod ending).

The last category is a type of dysnarrativa that paradoxically does not upset the fictional consistency of a game but actually tends to enhance it. Games seem well-adapted to comedy and horror because of the absurd or horrific implications dysnarrativa presents when we try to explain what is happening. The Broom Closet Ending and the Insanity Ending (and arguably the entirety of *The Stanley Parable*) employ dysnarrativa intentionally to elicit a humorous or horrified response. Traditionally comedy and horror benefit from disruption and thrive on unexpected inconsistencies that set the mind into an intended frenzy of laughter or fear. Dysnarrativa can be used intentionally since thematically speaking, horror and comedy stand to gain from inconsistencies. However, it is a delicate balancing act. This type of dysnarrativa is useful for games but is ironically still subject to other

forms of dysnarrativa if the designer does not tread lightly. Horror and comedy do not stand up to the second category of dysnarrativa, repetition, as a joke told for the one-hundredth time in the same way loses some of its pep (as this author often noticed in their repeat playthroughs for the sake of the thesis). While dysnarrativa is generally unpleasant it is actually a hugely effective tool if comedy and horror are a goal of the designer (or indeed the player) which will be discussed in greater detail in chapter 3. It should be remembered that dysnarrativa is not always a problem and that some of the most enjoyable games will intentionally employ it.

To sum up the four branches of dysnarrativa are:

1. Authorial Struggle: Where the player meets the designer. Player agency subverting the designer's intent or the designer not accounting for player subversion

2. Structural Dysnarrativa: Failing to account, fictionally, for the presence of repetition and failure in the structure of games

3. Dysnarrativa by Proxy: Material problems resulting from cheating, glitches or other problems with the legality and technology that props up a game

4. Dysnarrativa as Device: dysnarrativa used as a literary device in the aid of theming fictions in which inconsistency is a desirable aesthetic effect; usually in the genres of comedy or horror

The goal now is to develop a theoretical model that helps explain the exact mechanisms that lead to the branches of dysnarrativa and what is needed to reduce it.

Chapter 2: The Gap Between: Fiction and Significance

Some say music lurks in the lyre;

Why, then, closed in its case is it dumb?

Some say the sound comes from the fingers of the player;

Why then on yours do we hear none?

Su Dongpo (Harris, 1999, p.107)

Introduction - Gaps

As we have established dysnarrativa is the subjective phenomenological experience, by an audience, that a fictional world feels inconsistent in an aesthetically defective way. This chapter attempts to develop a model, the basis of which will be used to reduce dysnarrativa. It draws on several concepts and theories laid out by other researchers and builds upon conceptual work done in the last chapter. The end result is a model that shows how the different types of information in a game (the clashing of which often cause dysnarrativa) can be blended into information with a holistic quality that integrates other types of information consistently.

As discussed in the previous chapter, dysnarrativa stems from inconsistencies between different parts of a game as a whole. The presence of these gaps in games creates the unpleasant feeling that a game is incomplete, incoherent, contradictory or dissonant. Within the various branches of dysnarrativa we identified that it stems from the gap in the dialogue between the player and designer and the gap between the typical structures of games and the structures of fictions.The task now is to determine a means of repairing these gaps so as to avoid dysnarrativa.

In the *Silent Hill* example (See Fig.1.1) there exists a gap between several pieces of information presented by the game. One, a fictional statement, tells us that there is no dog around (as far as the player character is concerned). The second is depictive, it shows an enemy NPC that looks very much like a dog on-screen. The third is implied by the rules which make possible such an interaction between these first two pieces of information. In summary, the rules of the game allow for a dog to be visible while the player character states that no dog is present. However, the game cannot recognise, as a player might, the contradiction between these pieces of information. While this is a relatively minor case of dysnarrativa we can learn a lot about how dysnarrativa comes into play here. The first and second pieces of information both represent something fictionally, whether it be the player character's internal monologue or the depiction of objects and characters in the game's fictional world. The third piece in this example is a different type of information, while it allows for fictional contradictions such as this to exist it is not explicitly fictional information itself. Rather it describes what is possible within the game in terms of the tools the game uses to keep track of a game state. One can think of it as the rules of the game but it is also information concerned with what is emergently possible in the realm of both the software and hardware that projects the game.

Thus it can be said of a game that there are two broad types of information, that concerning a game's fiction and that concerning a game's rules.

Dividing a game into two parts, often its rules and narrative, is nothing new for game studies and indeed seems to form the main division between camps that give higher priority to one or the other (although this factionalism is disputed amongst some scholars) (Juul, 2005, p198; Kirkpatrick, 2011, p.70; Frasca, 2003; Eskelinen, 2001). However, if we leave the discussion at the assumption that games are clumsy amalgams of only story and systems then we are left unsatisfied and assume that the two are irreconcilable. This sentiment that a dualistic discussion is limited has been expressed elsewhere (Cook, 2014; Pearce, 2005). Surely if they were able to be joined naturally it would be self-evident and there would be no need to separate them in analytical study. I disagree with models that emphasise a dualistic approach to games and in the course of research for this thesis it occurred to me that the two types of information, while different, are actually subservient to a theoretical third type that joins them. This 'third type' may be related to dysnarrativa and could even be its antidote. In this chapter I lay out the train of thought that led me to develop these ideas further eventually leading to a theoretical model of how fiction does (or doesn't) work in a game. Let us begin the model with the two components that feature prominently in early models of game fictions: rules and fiction (Juul, 2005) (See Fig.2.1).

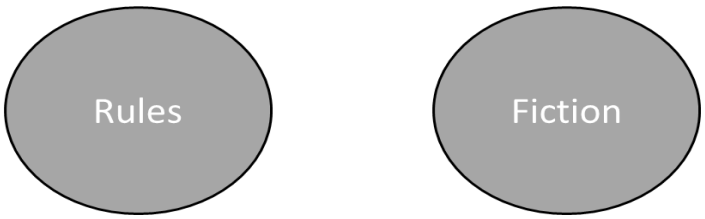

Figure 2.1 - Rules and Fiction visualised as Separate Components in a Game. [Author's own image].

Juul has noted that game fictions can suggest courses of action that are 'not implemented in the rules' (2005, p.179) as well as overlap harmoniously with rules in specific cases (Juul (2005, p.188) cites level design as one example). While Juul is correct in pointing out that rules and fiction are not as divided as most scholars assume, his concluding thoughts on the matter are relegated to stating that games are a mix of real-world actions and fictional outcomes. Juul does point out that fiction and rules can help a player learn one through the other but leaves the question open of how exactly this process can be intentionally achieved in specific cases of dysnarrativa (2005, p.196). Just as Juul re-examined the dualistic rules-fiction model to better understand the nature of games, I intend to do the same to see how information might specifically be better organised to avoid dysnarrativa.[5]

Two Parts in Conflict: Cognitive Dissonance and Simulation Fever

In *A Theory of Cognitive Dissonance*, Leon Festinger (1957) suggests that dissonance arises in a person's mind from two or more cognitive elements that relate but do not fit comfortably together because they are either inconsistent, contradictory or cultural standards dictate that they do not fit. Festinger hypothesises that dissonance motivates one to restore consonance and avoid or ignore dissonant information (1957, p.3). In effect there is a gap between two cognitive elements where the dissonance exists. They either contradict one another or do not logically follow from one another. Festinger puts it algebraically (1957, pp.12-13), x and y are dissonant if the following is true: if *x* then *not-y*. If they are consonant then the statement would read: if *x* then *y*. To give a less abstract example let us insert the Silent Hill example into the expression.

In the Silent Hill case we have two pieces of fictional information being allowed to contradict each other by the game's rules. *x* in this case can be taken to mean 'Harry Mason states that no dog is around' and *y* to mean 'no dog should be present'. The expression in full would then read 'If *Harry Mason states that no dog is around* then *no dog should be present'*. While this statement carries an air of prescription about it, it still concerns a state of consistency for the game. In order to

[5] It is worth pointing out that rules and fiction can be said to have their own sets of 'rules' which guide best practice for game design. There is also a similar discussion that can be had about form and content. Rules and fiction both have their own form and content but the discussion for now is more concerned with understanding how rules and fiction operate when dysnarrativa happens and how they could operate to prevent it.

be consistent Harry Mason's statement about the lack of a dog should be taken to be true so long as the presence of a dog is not meant as a comedic punchline or dramatic irony. This qualifier will be taken to task later as dysnarrativa (as previously discussed) can be used as a comedic or dramatic device. For now though we can see that the information in the *Silent Hill* example does not follow. Following the dissonant grammar of 'if *x* then *not-y'* the expression reads 'If Harry Mason states that no dog is around then a dog *should* be present'. Since the presence of the dog (not-y) conflicts with Harry's statement (x) the game is dissonant (if x then not-y =dissonance). This method of algebraically describing examples of dysnarrativa shows that Festinger's method for identifying dissonance is useful to us. Therefore it is worth examining cognitive dissonance theory further.

The diagnostic use of the word dysnarrativa implies gaps in autobiographical memory which are either confabulated or avoided in much the same way that cognitive dissonances are resolved. Cognitive dissonance is either resolved by introducing new information that confirms a bias held by the person (making the preferred bias seem like it has greater factual weight e.g. a smoker might, selectively, believe only studies or anecdotes that show smoking has little effect on one's health), by changing their behaviour to conform to pressures placed on them by the dissonance (e.g. a smoker could quit smoking after learning it is bad for them) or they change their cognition to account for the discrepancy (either by ignoring the dissonance or integrating it into their cognition e.g. 'smoking is bad for me but I don't care') (Festinger 1957, p. 31). Willful ignorance of dysnarrativa is certainly a viable option for players as they can be selective as they like with regards to what information they pay attention to, however I would postulate that this is an unsatisfactory outcome. At best players could be described as willingly suspending their disbelief but in many cases are resigned to stepping over large gaps in consistency for the game's own sake. Ultimately, it might be thought, the game is worth it, dysnarrativa is just the price of admission. Festinger observes that cognitive dissonances assail us constantly and are involved in almost every decision or belief we encounter (1957, p17), what really matters is the cases that are difficult for us to resolve. The same could be said for dysnarrativa in all works of fiction, there will always be discrepancies and the question is not how to remove them absolutely but how to resolve the most disturbing cases internally through cognition.

A phenomenon, similar to cognitive dissonance, occurs when interacting with simulations which is discussed by Ian Bogost (2006, p.105-107) and known as

simulation fever (derived from the Derridean term ‘archive fever’ (Derrida, 1996)). Simulation fever is an unpleasant feeling caused by a gap between the subjective interpretation of a simulation’s output and the explicit goal of the simulation (e.g. frustration at a computer model being too simple to accurately model complex weather patterns). The simulation’s representational tools and its user’s expectations often differ leading Bogost (modifying an earlier definition by Gonzalo Frasca (Bogost, 2006, p98)) to define simulation as the gap in information itself: ‘A simulation is the gap between the rule-based representation of a source system and a user's subjectivity" (Bogost, 2006, p.107). Further to this he adds that "*gaps are the basis of meaning making*" by which it is meant that knowledge about the simulation is derived from comparison between the representative model that simulates a system and the user’s prior knowledge of that system. If the gap creates meaning that is incongruent or inconsistent then simulation fever is felt and the user finds the simulation of limited or no use.

Bogost identifies two strands of simulation fever: simulation denial and simulation resignation. Simulation resignation is the resignation that even though a simulation is incomplete or even inadequate as a model of the real world it must still be used because limitations are an inherent part of the system. This process is an example of cognitive dissonance in which a simulation is identified as being an imperfect replication but the resolution is that we must use this simulation since it is better than all other less complete simulations; it provides a simulacrum that is ‘good enough’.

Simulation denial is more similar to dysnarrativa. It is characterised by a feeling that a simulation is oversimplified or inconsistent in a subjective way. For example, a simulation such as the game *September 12th* (Newsgaming and Gonzalo Frasca, 2003) (which Bogost (2006, p131) discusses) may be felt to be a poor or simplistic commentary on American foreign policy and its effect in combating terrorism. In the game, players can drop bombs on a middle-eastern city. The bombs kill citizens but those not killed by the blast become terrorists. The more the player bombs the country the more terrorists are created. This process expresses the message that bombing an enemy may not actually deter their ideological stance. Bogost describes one player who found this simulation to be too simple and thus found the game unsatisfactory. The game, they argued, leaves out too many facts about the situation to be a compelling commentary on the American response to the September 11th attacks.

Bogost argues that this simulation fever that comes from the combination of a rule-based representation and a user's subjectivity is extrinsic to the game and is a result of human limitations in subjective interpretation. Bogost suggests two solutions: dealing with "ambiguities, omissions, errors or controversies" presently felt by users of simulations, and the creation of "a body of criticism for simulations that relate their rules to their subjective experiences and configurations." My examination of dysnarrativa intends to tackle these points for games of all kinds.

Simulation fever and cognitive dissonance are highly similar processes to dysnarrativa. They all feature a disconnect or gap between two or more elements that creates an unpleasant experience for a user and all stem from a tension between cognition and representation. Bogost's model weaves together the process of dysnarrativa and cognitive dissonance. To use Bogost's definition as a template we can think of fictional worlds as generally sharing many analogues with the 'real world' that players inhabit. Fictional worlds in games can therefore be thought of as the 'rule-based representation of a source system' which is scrutinised by the player's own subjectivity. If a mismatch occurs then dysnarrativa is the outcome. Interestingly it is the player and the game that clash here rather than the nebulously-defined 'rules' and 'fiction'. The dissonance isn't so much ludonarrative as it is a difficulty of complementing one's own subjective logic of consistency with the various depictions a game presents to us.

Originally dysnarrativa was approached as a problem of the game being at fault for proposing fictional and ludic statements that are at odds with one another (as in Hocking's (2007) article on ludonarrative dissonance and my own initial approach to this thesis). The game was objectively at fault. The problem (through the lens of simulation fever) might be more accurately seen as the game not allowing for subjective resolution in the cognition of the player. To put it more simply it could be said that games that suffer dysnarrativa are not giving us an opportunity to understand their information in a way that we agree with. If we were to represent this with our current model it could be seen that dysnarrativa is what occupies the gap between our two components (See Fig.2.2) Gaps can exist between rules and fiction in a game and this is simplified in Figure 2.2.

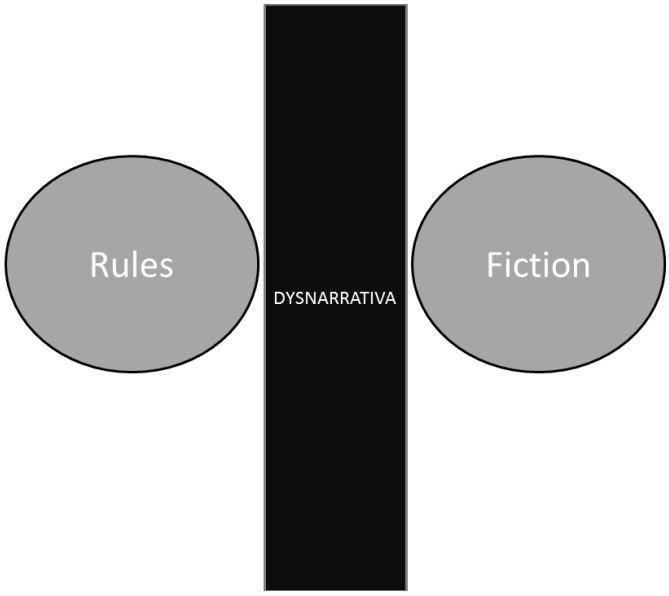

Figure 2.2 - Rules and Fiction are felt to be divorced when dysnarrativa is experienced. [Author's own image].

As I noted in *The Stanley Parable* analysis, it is not the player or designer who are separately responsible in an 'either-or' blame game, rather they need to work together. Obviously the designer is in control of the content of a game but the player must make the 'correct' or 'sensible' imaginative connections to avoid dysnarrativa. Thus a cycle presents itself: designer represents > player agrees > designer represents etc. (See Fig. 2.3). This cycle is broken if the player disagrees by noticing or being badly affected by an inconsistency (See Fig. 2.4).

Figure 2.3 - Visualisation of the cyclical loop between a designer and player trying to maintain a consistent fictional world (this will later be referred to as 'the negotiation loop'). [Author's own image].

Figure 2.4 - The negotiation loop is broken by the experience of dysnarrativa by the player. [Author's own image].

Festinger and Bogost both agree that resolutions for these types of phenomena begin with cognition and how it handles categorically different types of information. If dysnarrativa is a very similar phenomenon, which I have argued is the case, then this same principle should hold true. Dysnarrativa will be solved by influencing how information is perceived and understood by a player. Before we can begin to understand how to achieve this we must do some work to establish what types of information are concerned.

Pornography and Music: Fiction and Significance

Since games are examined here as a vector for fiction (consistent or otherwise) it may be worth looking at how fiction does not comfortably gel with formal processes in other media. Dysnarrativa is not unique to games and other media also feature different types of information that may not always mesh. In the course of this research many cases were examined where fiction is broken or played with by its author: breaking the fourth wall; metafictional stories; and cases where fictional plausibility is stretched to the breaking point. While games are often compared to film, theatre and literature in order to understand them as media for storytelling I believe it may be more fruitful to take a more general approach and look at games as media for relating fictional information. Two particular practices stand out alongside games where fiction is often challenged by the formal affordances of their

particular medium. Like games, these practices are not primarily associated with telling stories and even challenge traditional notions of fictional representation. The first is pornography, the second is music.

Linda Williams once observed that 'it is commonplace for critic and viewers to ridicule narrative genres that seem to be only flimsy excuses for something else - musicals and pornography in particular are often singled out as being really about song and dance or sex.' (Williams, 1999, p.126). In a similar way game fictions can often be interpreted as just an excuse, they exist for the game's own sake. Pornography, music and games are all forms that can be enjoyed apart from a fictional context and it is surprising that they are not compared more often given their remarkable structural similarities. For pornography, games and music an explicit narrative is arguably optional and their formal structure means that they often come across tensions when trying to convey fictional information. Fiction in pornography is fraught with difficulty when reading it mostly due to the nature of pornography and its audience. Like games, there are those who would question whether there is even any need for any kind of fiction, narrative or story in pornography. Game developer John Carmack made the infamous analogy that 'Story in a game is like a story in a porn movie. It's expected to be there, but it's not that important' (Kushner, 2003, p120). However, this does not detract from the fact that there are audiences that engage with stories in both games and pornography. It merely highlights an interesting commonality which I argue is one of many. Games, pornography and music are all very old practices, going back to ancient and possibly prehistoric civilisation. As such, their roots are not in fictional depiction but rather in appealing to the senses. The formal core of each is related to the sense pleasures of sound, sexual arousal and victory rather than storytelling.[6]

[6] The thing that caused me to see a link between these very different practices was the revelation of the inseparable role repetition plays in games. Repetition is also a hallmark of music and of pornography. Oliver Sacks, in his study of the cognition of music, emphasises the importance of repetition in music:

> There are, of course, inherent tendencies to repetition in music itself. Our poetry, our ballads, our songs are full of repetition. Every piece of classical music has its repeat marks or variations on a theme, and our greatest composers are masters of repetition; nursery rhymes and the little chants and songs we use to teach young children have choruses and refrains. We are attracted to repetition even as adults; we want the stimulus and the reward again and again, and in music we get it.' (Sacks, 2007, p47).

Similarly, when discussing video games in relation to other media, Dovey & Kennedy observe '...no other kind of cultural consumption requires this kind of repetition. Instead we find it in cultural activities where musicians or sports players are called upon time and again

To make sure there is no confusion at this stage I define music as organised sound which is chosen for display. I define pornography as any material made in any medium for the primary purpose of instilling or aiding sexual desire and/or arousal in its audience. Notice that these definitions neither include or exclude the possibility of fictional information in works of music or pornography (yet in practice they very often exclude it).

Take the concept of a pin-up for example. In a pin-up illustration or photograph a model is displayed in either an abstract or fictional setting. In the case of a pin-up which describes a limited fictional world, the significance of the fiction is a curiosity. The mere appearance of erotic stimuli (typically the nude or partially-clothed human body in an erotically charged scenario) is enough for pornography to fulfill its function. Either the fiction enhances the pornographic function (as in the case of a particular role-playing or uniform fetish) or it serves as 'window-dressing' a non-vital bonus that gives the pin-up a degree of distinctiveness from other pin-ups. Likewise it could be said of a game that as long as the design of a game is functionally adequate to provide 'fun' then the fictional world of the game is also 'window dressing'. In both cases, the fictional aspect may not be as separate as we imagine.

Pornographic films of the latter half of the 20th Century, as documented by Linda Williams (1999), would more commonly feature narratives specifically structured around erotic subject matter. In the film *Insatiable* (Stu Segall, 1980) the plot centres around a wealthy and powerful woman's quest to have satisfying sex. In this instance a fiction gives explanation for the formal pornographic elements (i.e. the revelation of sexual stimuli to the audience). While these more fictionally explicit films do exist, the majority of pornography rarely features a narrative. The sub-genre of porn parodies (Simon George, 2003) and the hardcore feature films that Williams (1999) examines are seen as exceptions to the norm when compared to more 'gonzo' films or non-fictional sex scenes. Modern games have also had a similar trajectory regarding narrative where a heavy focus on story is marketed as a unique selling point as in games such as *Heavy Rain* (Quantic Dream, 2010) or *Gone Home* (Fullbright, 2013)

Williams (1999) notes that in pornography a formal structure, similar to that found in musical theatre, is at play. Drawing from 'The Film-maker's Guide to Pornography'

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to repeat actions in order to achieve a preferred performance or a kind of virtuosity'(Dovey & Kennedy, 2006 cited in Kirkpatrick, 2011, p100)

(Ziplow, 1977), Williams shows how ‘numbers’ and narrative work in parallel in pornographic films. These numbers are not unlike the formal musical numbers that exist in musicals (duet, solo etc.). Distinct from narrative, numbers merely describe a formal template on which narrative may or may not be transcribed. In pornography, according to Ziplow, the numbers are:

1. Masturbation
2. Straight sex
3. Lesbianism
4. Oral Sex
5. Menage a Trois
6. Orgies
7. Anal sex
8. S&M

While this is by no means a comprehensive list of numbers it is clear that these numbers do not prescribe many specifics about fiction. Likewise in musical numbers such as a solo, duet or ensemble number, fiction is not yet established, only the formal musical structure is described. We can see similarities in games where a boss fight, hub-world or puzzle can be thought of as numbers which do not prescribe any specific fictional information but might serve as the foundation for it later.

In music, and more prominently in musical theatre, fiction is communicated alongside formal musical information. Typically a distinction can be made between music and lyrics, and in the case of musical theatre this extends to stagecraft, dance choreography, libretto, acting and costumes. The question is where is fiction communicated in music? Lyrics can be read as making fictional statements that are merely set to music but in some cases can be abstract as in doo-wop, wordless choir or scat singing. Can music itself make fictional statements? Ludwig van Beethoven’s sixth symphony - ‘*Pastoral Symphony*’ - (van Beethoven, 1951) is often cited as an example of music that features no lyrics yet represents a fictional setting. This is known as ‘program music’ which is thought of as having ‘content’, as opposed to absolute music which is purely abstract, non-representational and textless (Dahlhaus, 1989). Beethoven’s *Pastoral Symphony* features titles for each movement which describe different aspects of an idyllic countryside and the music itself features identifiable sounds such as the imitation of bird-calls and the sounds of thunder by musical instruments (See Fig. 2.5). While some music integrates these aspects of fictional representation, a large proportion of music features very

little explicit fictional information partially because it does not need to in order to function as music in much the same way as pornography or games do not need fiction to function.

Figure 2.5 - Excerpt from *VI Symphonie F Major "Pastorale" Op.68.* showing the musical approximation of bird calls (nightingale, quail and cuckoo). by Ludwig van Beethoven (1951).

Richard Dyer (1992) has suggested that the formal non-representational parts of music are in contradiction with representational signs in musical theatre making musicals a contradictory medium. 'What film musicals do, he proposes, is to manage these contradictions so that superficially they seem to disappear.' (Taylor, 2012, p.10). Music theorist Millie Taylor has suggested that the discontinuity of musical theatre is where the pleasure of the musical may be derived. Musicals take on an unrealistic almost escapist sense about them due to how the formal aspects rule over the narrative. Taylor describes how romantic couples in musicals can be identified by the fact that they have a similar vocal range which compliments one another (2012, p.27). Other character archetypes are often signified by their musical performance showing a unique connection between formal music and fictional information. Taylor's analysis of *The Rocky Horror Picture Show* (Jim Sharman, 1975) shows how musical styles inform us about characters.[7] This connection may make it easier for audiences to intuitively understand the fiction of a musical without

[7] Pop is virginal and conventional and so Brad and Janet sing in this style. This contrasts with Dr. Frankenfurter's sexually deviant and flamboyant glam rock style or Eddie's rugged and manly rock and roll vocals and so on.

having to feel that the fiction is an excuse for the music to happen as is often the case in pornography.

Richard Dyer developed a theory about how different musicals work and categorised them into three broad types: integrated, separated and dissolved (Dyer, 1992, p.28; Williams, 1999). These terms were applied to pornography by Linda Williams (1999, p160) and perhaps the concepts they discuss can also be applied to game fiction given their marked similarities. According to Dyer, integrated musicals are musicals where the songs are directly woven into the narrative. This is usually done by naturally setting up a fictional explanation that cues a song (as opposed to spontaneously bursting into song in any given context) or by making the songs part of the diegesis. In other words characters are given reasons for why they might be singing, as in *Chicago* (Fred Ebb & John Kander, 1975). Separated musicals are ones where narrative and number have no relation and characters frequently express their thoughts and feelings through song but for no apparent reason as in *Grease* (Jim Jacobs, Warren Casey & John Farrar, 1971) or *West Side Story* (Leonard Bernstein & Stephen Sondheim, 1957). Dissolved musicals are musicals where the fictional world is fantastical to a point of being utopian. The nature of dissolved musical fiction is such that singing is a means of dealing with the fictional world and metaphorically represents a character's existence in relation to the narrative via music (an example could arguably be *The Wizard of Oz* (Victor Fleming, 1939) as seen through the lens of a childish protagonist's imagination). In dissolved musicals the world is so pleasurable that it seems to call forth music but not 'for no reason'. It is just how things operate in that utopian fictional universe (Dyer, 1992, p.30)

Linda Williams' took these three categories of musical and noted similarities to the way that narrative and number are connected in pornographic films. Integrated pornography gives fictional explanations for why characters have sex. Separated pornography does not bother with fictional explanations for sex or often any kind of fiction at all. Lastly dissolved pornography features characters in a fictional world where sexual congress and promiscuity are commonplace.[8] It would be simple to

[8] Williams highlighted that the connection between musicals and pornography demonstrated the similarities between how the human body is configured in both practices. However, I would like to emphasise that they are closely related structurally. "This extended analogy to the musical has allowed us to assess qualities of body performance that, although inherent to hard core, are often overlooked because sex, in contrast to song and dance, appears so natural and unperformed. I have therefore emphasized the reverse of the truism that dance in the musical is really about sex by suggesting the ways in which sexual numbers are like dance; in showing how sexual performances are choreographed, placed in a scene, and

transpose the categories of integrated, separated and dissolved narratives to games and the analogies are clear. However, the concern of this research does not stop at the identification of texts that feature gaps. It is how these gaps are closed that is a prime concern. Within pornography and music, techniques have been developed to adjust to the quirks of their own forms that attempt to sew together fictional information and the unique formalities of their respective medium.

In the case of music, mickey-mousing and sound painting are two that are used to signify something halfway between musical and fictional information. Mickey-mousing refers to the sudden interruption of a musical score with music that synaesthetically mimics a character's actions or emotional mood. It is so-called after the musical scores of early Disney (and other animated cartoons) which might signify a character's angrily walking away by a thumping rhythm that crashes over the background score. Sound-painting is a similar technique whereby the score is used to create rudimentary sound effects with musical instruments. The music in this case is used as a mimicry for a genuine sound such as birdsong or a punch. Foley recordings could be used in these cases but perhaps these sounds when played musically add to the musicality of the fictional universe and join what is seen and heard in a novel way.

In pornography, fetishes are often a way into fiction. Costume roleplay can naturally lead to many different narratives such as the schoolgirl-prostitute example (described later in this chapter by Fauconnier & Turner, 2002) or the fictional perversion of a nun used as a pretext to the religiously charged breaking of taboo. There are many common narratives found in pornography organised around different fantasies and fetishes. The accidental discovery of someone in a vulnerable or sexually compromising situation, the arrival of a workman to fix someone's pipes or the seduction of a young person by an experienced one. These are all fictions that are not required for pornography to function yet they attempt to meld fiction with that function in order to enhance that function. These melding attempts are not always successful but it points to one thing being clear. There are multiple parts of these media, of which fiction is one part, where stable fictional consistency is achieved by making sure non-fictional parts, not only do not conflict but, actively combine with fictional ones.

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deployed within a narrative context, I have tried to get beyond the "fact" of sex to its rhetorical function in texts." (Williams, 1999, p270)

Let us suppose that in pornography and musical theatre there is information that can be termed fictional information. Obviously (and especially in the case of music) it is possible to have abstract pieces that either forego fiction (absolute music) or are representative as a matter of document (as in pornography with no illusion of fiction). These cases are not being ignored but for now let us focus on the fictional information as it exists in certain cases. This fictional information may be consistent or inconsistent but it is there. The question turns to what other information is communicated if it is not fictional? I have described this as ludic information or 'the rules' in relation to games earlier in this chapter but having examined other media more closely it is perhaps more proper to say that it is a type of information common to all forms of media. The rules of a game are certainly a part of this other type of information (as they can't really be said to be describing fictional events directly) but the sense is that it doesn't stop there. In music this other information could be said to be the 'rules' of music: time signatures, tempo, harmony and other conventions of western music notation. Yet I would suggest that it is not just the abstract information that describes a medium but rather the medium itself that communicates this other type of information. It just so happens that most media can also communicate fictional information alongside their native and inherent character (which may be why the discussion has centred around a dualistic interpretation of how games function - rules versus fiction). For lack of a better word I suggest that the information unique to a medium might be termed 'significant' as a means of differentiating it from fictional. While fiction can certainly be thought of as significant (in the colloquial sense) to a novel or film there also exist films and books that contain no fiction but still represent things with information unique to that medium (i.e. the information is organised on pages or rolls of film stock). Etymologically, one can take a derived meaning of 'significant' from its Latin roots: *signum*, meaning 'distinguishing feature' (Jones, 2016, p.182) and *fico*, 'I make' (Jones, 2016, p.39). *Signa* + *ficant* thus means 'a quality that makes distinct'. Without this information there is no medium, thus it is *significant to that medium*. The notes of Beethoven's 6th Symphony are presenting us with significant information which helps to represent, but is not actually, the fictional information of the work. The erotic stimuli of the human body and its display in pornography could be considered the significant information that may lead us to imagine a fiction surrounding various sexual acts. So it is with all fictional works. However, when there is a gap between significant and fictional information (at least in the cognition of the audience) dysnarrativa will occur.

This analogy could be applied to the concepts of separated, integrated and dissolved fictions in musicals. Separated fictions arguably suffer from dysnarrativa as the significant form of the musical has no real connection to its fictional content. As with cognitive dissonance a solution here is to just take separated musicals at face value and ignore the potential dysnarrativa. Integrated musicals feature a union between the two and dissolved musicals operate much like separated musicals but in a fictional world in which the significant aspect is a natural part (e.g. it is expected in the world of the musical for one to burst into song). The goal it seems would be to focus on how to integrate and dissolve fictional and significant information together rather than leave them separated.

In summary, significant information is so called not because it is more important than fictional information but because it holds significant meaning to the medium it is communicated by, which cannot be classed as explicitly fictional. For games, significant information refers to information that describes the operation of a game, how it is played and what is ludically possible and/or legal. It can be thought of as the rules of a game however this is not the only thing it covers. While the rules certainly do constitute significant information there are cases where significant information is not explicit and can even be hidden from players. Significant information is information that relates only medium-specific meaning that is not otherwise fictional. In a game, it consists of the rules, goals, situations and materials for the playing of a game. Thus we have a name for the component that is commonly referred to as ‘game’ or ‘rules’ within the model. As a bonus, this also lets the model be freed from just discussing games.

To give a practical example of significant information: before beginning a game of Monopoly players might discuss which version of Monopoly they will play with (digital or analogue?), whether they are playing the game with a time limit, whether trading should be allowed, how best to determine who goes first or what the rules for rolling doubles or getting out of jail should be. All of these discussions revolve around significant information. In a video game some significant information is usually hidden from the player due to the fact that they are partially automated. Explicit information about hitboxes, frame data, statistical information and other (partially) hidden information is significant but is usually approximated, guessed at or not considered by a (human) player during play. What is certain is that without significant information there is no game.

Fictional information is a little easier to define. It is information that pertains *only* to the fictional world of a work (in short, its fiction). Generally speaking, the fictional setting, fictional events, characters, flavour text/dialogue, art assets or character names can all be considered fictional information. A practical example of fictional information would be the fact that the character Mario (in *Super Mario 64* (Nintendo EAD, 1996)) has an Italian accent and wears overalls. There is no practically ludic purpose for why this should be but it does give the character some recognisable traits and provides information about the world of the various games in which Mario stars. To simplify further, one can think of significant and fictional information influencing the statements we make about games. For instance, 'I lost the game' would be a significant statement. 'Stanley died' would be a fictional statement. Fictional information does not often depend on qualities specific to a medium and so, in this way, it is not significant. As with significant information, we can now rename fiction as specifically 'fictional information' within our model.

Fiction (as distinct from fictional information) is a little harder to define. There is an agreed understanding of what it means in most cases but for the sake of this discussion it should probably be pinned down before misunderstandings accumulate. Walton encountered similar difficulty in his examination of definitions that oppose fiction to reality, non-fiction or truth. He uses it quite broadly and interchangeably with the term 'representation' and links it closely to imagination. It is not restricted to literary fictions and includes all forms of depiction. Ultimately Walton does not settle on a definition as the very word is so ambiguous that it would be difficult, if not impossible, to come to an agreeable definition that is not incredibly vague or restrictively narrow. One thing Walton does focus on is the idea of fiction as possessing the function of '*serving as a prop in games of make-believe*'(Walton, 1990, p91). This is to say that fiction is simply an anchorage point from which the audience's imagination may develop a 'game of make-believe' which, in practice, can be as simple as viewing a painting and imagining that its depictive content exists in a fictional world.

Fiction's function, as Walton notes, can differ greatly depending on the context it is presented in and for what purpose its audience seeks it out.

> What counts as fiction will depend on how its maker intended or expected it to be used; or on how, typically or traditionally, it actually is used; or on what uses people regard as proper or appropriate (whether or not they do so use it); or on how, according to principles, it is in fact to be used (whether or not people realize this); or on one or another combination of these (Walton, 1990, p91).

As is clear from this quote, fiction is many things and defining it becomes a muddy task. I understand it to be identified in much the same way Walton's representations are defined: as a prop in a game of make-believe. To put it succinctly (but by no means conclusively) *fiction is information that is constructed by an author for the sake of imagination by an audience*. This sets it aside from interpretative imaginative acts that we will discuss later. Now that the components of a game that are involved in dysnarrativa have been more concretely identified (See Fig. 2.6) we can see that gaps between these very different types of information still present a problem.

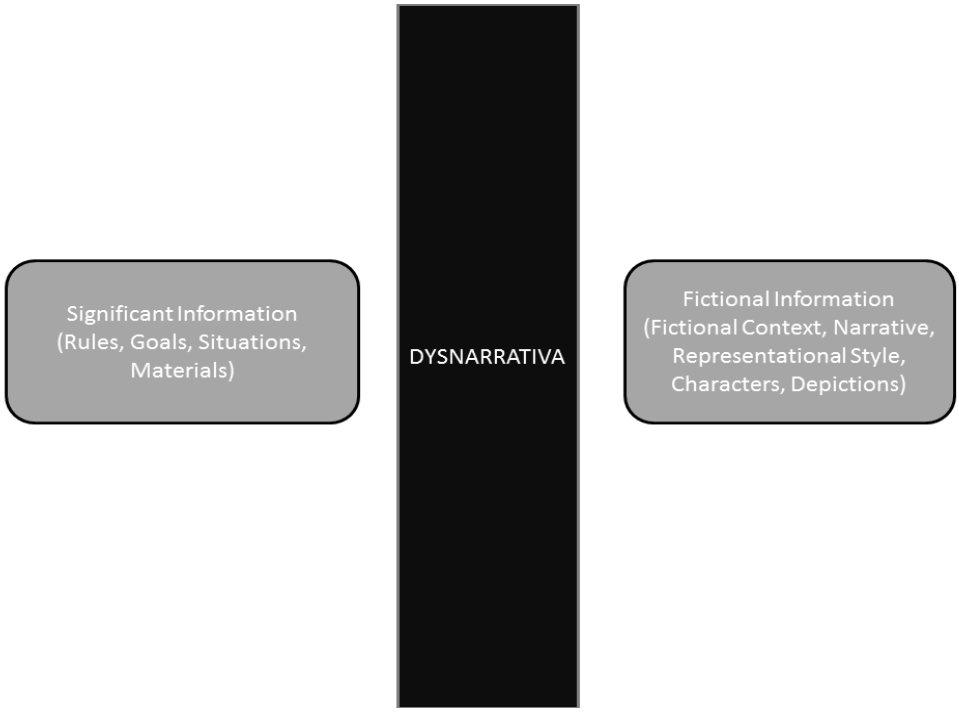

Figure 2.6 - Significant Information and Fictional Information replacing Rules and Fiction in ,.the model. [Author's own image].

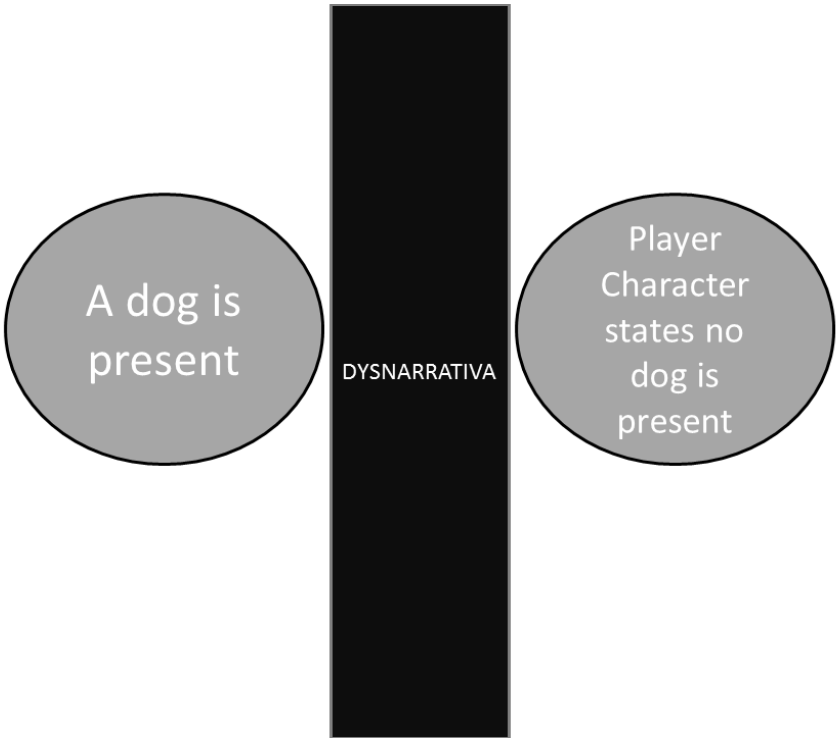

Figure 2.7 - The model in Figure 2.6 adapted to illustrate the *Silent Hill* example in Figure 1.1. [Author's own image].

Using the example from *Silent Hill* shown in Figure 1.1 we can see that the significant information is more than just the rules of a game and bleeds into fictional statements quite freely as it necessarily makes definitive statements about the game state (See Fig. 2.7). If gaps between the significant and the fictional are the source of dysnarrativa then perhaps the best strategy available to us for reducing dysnarrativa is to close the gap it exists within. Thes question is how to bridge this information.[9]

[9] It may be tempting to see an analogy between significant and fictional information and the more classical concept of form and content. At this point I would like to highlight the relation so that it is not confusing moving forward. Fictional information could be misunderstood as merely the content of a game, its subject matter. However, I have tried to, for the moment, objectivise the key relations and their disfunction for the goal of eliminating dysnarrativa. Fictional information includes more than just fictional statements, it includes representation, diegetic text, style and subject matter. Any given piece of fictional information is likely to have its own form and its own content. The same can arguably be said of significant information even though it is mostly formal. Therefore I feel that form and content need not enter the discussion yet as I am not interested in further subdivision but rather the uniting of information for the perception of games as a whole.

The Gestalt and The Gutter: Gap Closure

Now that we have established what the gaps in information exist between our attention turns now to how to begin bridging those gaps. To do this I would like to develop the model to illustrate the process by which the gap between significant and fictional information is closed. The foundations of the model will be drawn from a look at another useful medium to consider - comics.

In Scott McCloud's *Understanding Comics* (1993, p5), McCloud points out the existence of gaps (literal divisions) between panels in comics. These gaps, colloquially referred to as 'the gutter' by comic authors (McCloud, 1993, p66), signify a point of change between the two panels where they reside. This gutter is a piece of significant information that literally separates panels of fictional information. McCloud argues that the way in which this gap is interpreted is fairly unique to each reader and is what gives comics a compelling form of interpretive reading (See Fig. 2.8) (McCloud, 1993, p.37). Much information is omitted requiring some imaginative effort on the part of the reader to infer what happens there. Very few media outline gaps in information in such a literal way. Murray (1997) has noted a similar effect in literature which gives readers very little information to go on subsequently forcing them to imagine entire scenes and characters from just textual descriptions. Comics simply outline this aspect of storytelling in a more visually explicit way (i.e. the gaps represent the parts of the text that require imaginative input).

Figure 2.8 - Extract from *Understanding Comics* by McCloud (1993, p. 68)

The example McCloud gives in Figure 2.8 shows how comics are incomplete in terms of the information they give the reader. In this example we see a set-up (two people in an altercation) and a result (someone screaming). We do not see how the two are linked although many might guess that the second panel depicts the scream of the victim after presumably being attacked. In this excerpt and throughout the book McCloud notes that this is not the only possible reading. The scream could come from the axe-wielder or the two panels could even represent a scene change. What is clear is that the information is filled out by the reader's imagination helped along by the fictional context given by the author. Imaginative closures do not only occur in the gutter either. McCloud (1993, p.155) discusses how similar imaginative connections must be made between language and image - two completely different modes of representation often interdependently linked in comics.

This presents a possible solution for the closing of gaps and subsequently the reduction of dysnarrativa. The question is how is the gap between panels actually closed? McCloud (1993, pp.62-3) discusses this further and suggests the answer lies with 'closure'. A term originating from gestalt psychology, closure (also referred to as 'reification', one of four properties of perception categorised by gestalt psychology (Lehar, 2004)) serves to automatically join gaps in perceived information. Representation and even human perception are, by nature, not comprehensive - we cannot perceive/represent an object in its entirety simultaneously. This is referred to as the intersubjective access of objects. One cannot see all of an object at once so the rest is either imagined or referred from memory (Gallagher and Zahavi, 2008, p.101).Through various cognitive processes, we are given a helpful illusion that allows for a practical and total picture of the world around us. It operates automatically and without a great deal of effort. Closure and other similar properties of perception (namely emergence, multistability and invariance) can be seen in many of the visual illusions gestalt psychology employs to demonstrate its principles (See Fig. 2.9).

Figure 2.9 - The ‘dog picture’ commonly used to demonstrate the phenomenon of ‘emergence’ whereby seemingly incomplete information is filled out by mechanisms of perception. by Boyer & Sakar (2000, p.95)

In Figure 2.9 a dalmatian can be perceived, its head bent down to sniff the pavement. The image gives very little information to go on and it could be argued that objectively the image is no more than a smattering of abstract, black objects. Yet, the mind is still able to take this information and represent something specific. To stretch an analogy, this image could be said to contain both fictional information (a dalmatian sniffs a pavement) and significant information (the black and white areas that are the image). Somehow our minds join these two to create something coherent. The process is useful (and arguably unavoidable) as it fills out details of apparently random patterns or images that feature very little information. This phenomena is known as ‘emergence’ (Boyer and Sakar, 2000; Lehar, 2004). It may be an evolved process to help us identify things quickly in visually noisy environments but the most relevant thing to consider is whether closure and other principles of perception are useful to directly implement as a design solution or not.

What is compelling about these perceptual operations is that they, seemingly, achieve what I am looking for and with little effort. The motto of gestalt psychology: ‘the whole is other than the sum of its parts’ (Kohler, 1969) sums up this idea. Perception is dependent on simplified wholes, things are not perceived categorically without effort. In the case of an optical illusion, it is difficult to perceive parts objectively because the whole creates a new image (Kohler, 1969, p.46). It is often

more difficult to perceive something as multiple parts than as a singular whole because this requires conceiving of an object as a collection of smaller objects and therefore more concepts to imagine. This leads me to think that if fictional and significant information were presented the right way, they would naturally be perceived as whole. Another principle from gestalt psychology, ‘assimilation’, describes how a perceived stimuli can become associated with a meaning that is not presently perceived to the point where it is difficult to perceive the stimuli without being reminded of an arbitrary meaning (e.g. a red traffic light meaning ‘stop’) (Kohler, 1969, p.139). In principle it would be good to have a form of game design that achieves this for fictional and significant information. If dysnarrativa is indeed caused by gaps in fictional and significant information then a means of closing these gaps that already exists in human perception would be an ideal starting point for a solution.

These properties of perception allow for the automatic bridging of gaps in our perception. For instance we can see two dots and a curved line as a smiling face because of the unavoidable ability to recognise faces (known as pareidolia). Closure and other properties could be thought of as an unconscious or automatic imagination. However, they are not completely useful from a design standpoint for two reasons. Firstly these illusions primarily happen for very basic information that does not communicate much in the way of meaning. Many of the examples of visual illusions and pattern recognition show that it is practically only useful for visual information which is not necessarily the only domain of dysnarrativa (which often tends to involve conceptual and verbal contradictions signified by different elements). This also leads to the second point of why it is not specifically useful. Properties of perception, unsurprisingly, affect perception. Perception is not the same as cognition and, as was learnt from Bogost and Festinger, the key to resolving dysnarrativa lies with managing subjective interpretation and cognition, not direct perception (which tends to be a more objective phenomena). McCloud also makes the link to imagination clear when he states: ‘Here in the limbo of the gutter, human imagination takes two separate images and transforms them into a single idea’ (McCloud, 1993, p.66). All of this leads me to believe that imagination, not closure, might be the better place to look.

Imagination, typically a more involved and creative process has some advantages over exploiting perceptual phenomena for the reduction of dysnarrativa. Imagination is not limited to visual information, it makes conceptual connections between different ideas and, because of its creative aspect, it is generally more enjoyable for

a person than closure is. It is also a highly subjective process. If comics join the gaps between significant and fictional information it is not entirely due to closure but to opportunities for complex imaginative connections that the author of a comic has presented to us. This means that this brief discussion of gestalt psychology is a dead-end and arguably McCloud's use of the term closure is slightly inaccurate but it has still been useful in carving out the path for the model.

Comics have helped reveal the structural configuration of the problem more explicitly and thus the space where the imagination must work is highlighted by an exact space (the gutter) (McCloud, 1993, p.65). In media such as film or television the spaces where this occurs are seamless, happening in split-second edits and the illusion of the persistence of motion (primarily being obscured by the rapid movement of time in a temporal medium). In the early 20th Century, film pioneer Lev Kuleshov developed a technique, now known as the Kuleshov effect. Research into film concluded 'that the shot, or cinematic sign, has two distinct values: (1) that which it possesses in itself as a photographic image of reality and (2) that which it acquires when placed in relationship to other shots.' (Cook, 2004, pp.118-120) Respectively these two pieces of information, communicated simultaneously via the Kuleshov effect, are fictional (the content of the image) and significant (the medium-specific principle of shot to shot editing). Kuleshov's experiments were concerned with how film signifies meaning and, through editing, the gutter is closed with little effort in film. The concept of 'suture' in film operates similarly to use the imagination to effortlessly join information (Magrini, 2006). The gutter seems to be more difficult to locate in games as they are a largely interactive medium that is organised in space *and* time. As McCloud has observed this makes it harder to identify where imagination must bridge gaps: 'The closure of electronic media is continuous, largely involuntary and virtually imperceptible' (1993, p.68). What is important is that it can and does take place.

Dysnarrativa can be thought of as preventing imaginative connections as it doesn't join information but rather *emphasises* how information does not join (See Figs. 2.10 and 2.11). Arguably the reverse process, leveraging the player's imagination, could help the reduction of gaps in information in games as it serves to make connections between different types of information. If imagination is to be meaningfully guided by a game then time must be taken here to understanding how it happens so that we can lay out, in detail, how to reduce dysnarrativa.

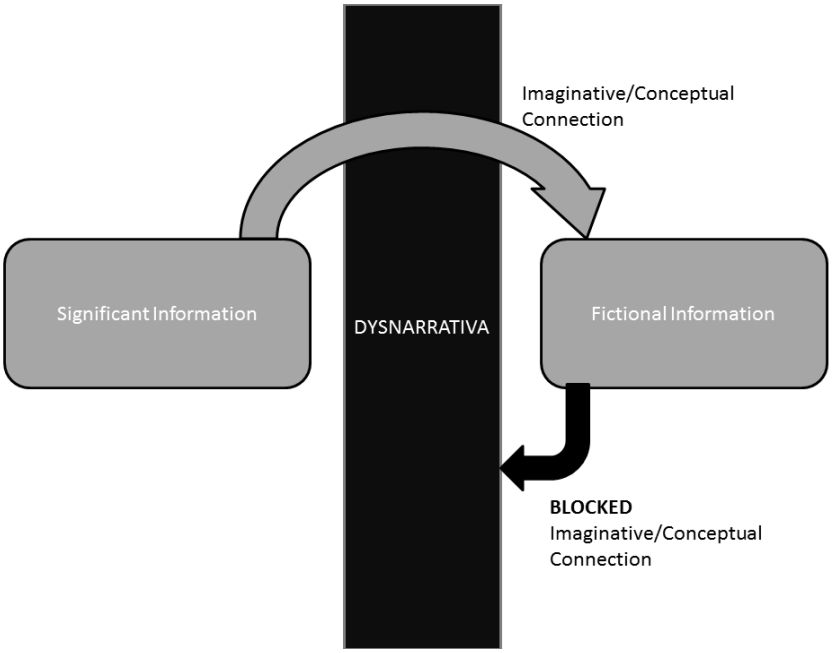

Figure 2.10 - Visualisation of how imaginative/conceptual connections bypass or are blocked by dysnarrativa. [Author's own image].

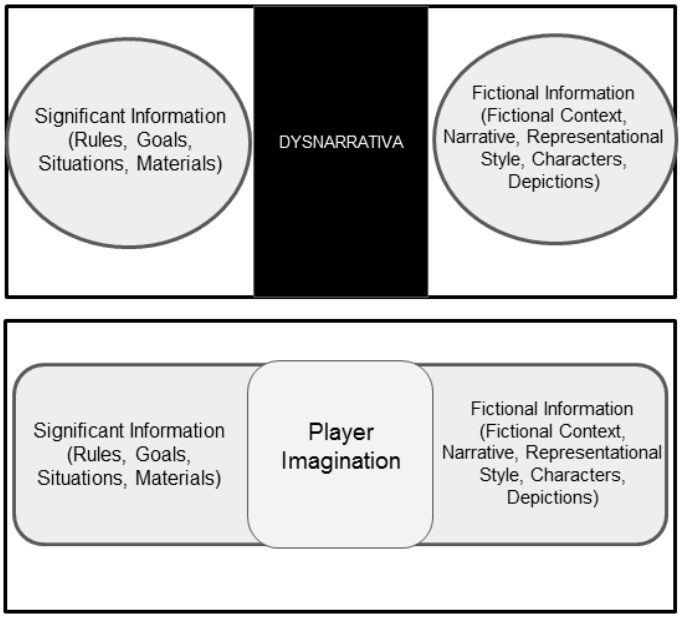

Figure 2.11 - Comparative visualisation of how the gap between significant and fictional information might be separated or integrated by dysnarrativa and player imagination respectively. [Author's own image].

Conceptual Blending: Imagined Information

Gilles Fauconnier and Mark Turner (1998; 2002) proposed a promising theory of cognition that shows how the mind can form an original concept from two different inputs. They termed this process 'conceptual blending' and it has since become one of several leading theories on how cognition functions (Langlotz, 2015). Fauconnier & Turner suggest that from two inputs the mind is able to synthesise a completely original concept (a 'blend') that features properties of both the source inputs but also has properties unique to itself. The blend, much like the gestalt psychology maxim, is other than the sum of its parts. Fauconnier & Turner argue that this process exists in language and cognition and can be seen in many metaphors, analogies, practices and words. Although conceptual blend theory is not falsifiable and features drawbacks pointed out by Gibbs (2000) and Coulson & Oakley (2000, pp.191-194) it has proved useful for discussing meaning-making in various studies of media (Langlotz, 2015; Harbus, 2012; Taylor, 2012 and Coulson & Oakley, 2000, pp.184-186). Taylor (2012, p.91) has also related conceptual blending back to the discussion of narrative and number in musicals. Prompted by the usefulness of Linda Williams' theories on musical theatre for dysnarrativa so far I believe conceptual blend theory holds similar promise. I noticed a similarity in my own developing model and upon researching further, the conceptual blend looks to be a strong foundation for the mental model that will help show how to reduce dysnarrativa.

In Japan, some brothels have rooms designed to look like schoolrooms with the prostitute dressed like an underage schoolgirl (despite the fact they are actually above the age of consent and consequently unlikely to be a highschool student themselves) (Fauconnier and Turner, 2002, p.28). The customer and the prostitute are under no illusion about the set-up. Fauconnier & Turner argue that the appeal lies in a blend of the two ideas. The prostitute is legally obtainable but a highschool girl is not, thus the schoolgirl becomes attainable in the blend created in the mind of the customer. The decor and costume match the school setting but actual sex is introduced via blending and is made real by the brothel providing an analogous physical space to the customer's imagination. The two inputs: highschool and brothel are blended into something new that is shaped from, but different to, both ideas.[10] The ideas of the schoolgirl and the prostitute are compared for similarities and differences. This is so the blend can include useful information derived from both and discard unwanted information. The illegality of sex with a highschool

[10] There is a marked similarity between this example and my own examples of how fictional and significant information interact in pornography earlier in the chapter.

student is discarded as are the appearance of a brothel and prostitute. Also new possibilities are afforded by the blend. Neither the prostitute or the highschool girl might reciprocate with genuine passion but the blend allows for counterfactual desires to be realised (i.e. the highschool girl is passionately involved) that are not true in either of the source inputs (Ibid., 2002, p.29).

To elaborate the conceptual blend process further I will briefly summarise the key terms and concepts. A conceptual integration network is visualised as a diamond shaped diagram that Fauconnier & Turner use to illustrate the process (See Fig. 2.12). Each of the circles in the diagram represents a ‘mental space’ in which various concepts are gathered for different purposes depending on the role of that mental space.

Fig. 2.12 - Model depicting the mental spaces that are cross-referenced in a conceptual blend. by Fauconnier & Turner (1998).

The two inputs can be seen on the left and right corners of the diamond where they are compared at the top of the diamond in what is known as a generic space. Bear in mind that this is all cognitively automatic, this is not a process that we consciously go through step-by-step in our daily lives. In the generic space similarities are identified and meaningless differences are omitted as can be seen above. Then a blend is synthesised (as can be seen at the bottom of the diamond network). This blend not only contains similarities identified in the generic space, it also brings

together some of the differences between the two source inputs into the blend. This is known as ‘selective projection’ a process by which only information relevant to the blend is carried over (regardless of whether it is shared by both inputs or not). Fauconnier & Turner stress that differences that form clashes between inputs are still useful to the blend process: ‘Far from blocking the construction of the network, such clashes offer challenges to the imagination; indeed, the resulting blends can be highly creative’ (Ibid., 2002, p.131). Also the blend takes on characteristics not found in either input as a natural matter of being an original concept (Ibid., 2002, pp.46-7). One can think of the analogy of two parents and a child. Genetically the child inherits almost identical features to both of its parents but will not simply be a combination of those two people; they are a new and original person - psychologically, physically and genetically.

The process of blending leads to a degree of emergence in its structure and outcomes. Conceptual blending is not exotic and is constantly happening. Hundreds of source inputs may be being compared constantly by the mind in order to discover those blends which are strongest or most conceptually distinct. Matching patterns in different inputs requires some degree of imaginative effort and even more so when the blend is elaborated into an original idea. This is how the human mind is able to come up with original concepts despite working with inputs that are not necessarily original.

One of the major byproducts of blending (Fauconnier & Turner argue) are quirks of language. By identifying key similarities and differences between different concepts such as the words ‘jail’ and ‘bait’ we can generate a new concept that holds similar meanings to both inputs but with a new and distinct meaning i.e. the term ‘jail-bait’. ‘Jail’ changes its previous, but still related, meaning of ‘a place for prisoners’ to meaning ‘the consequential result of this specific forbidden object’. Bait similarly changes from ‘food used to lure an animal’ to ‘a wrongfully desired action that leads to entrapment’. Jail-bait, when used in common parlance is not used to refer to prisons or food but people under the age of consent. The original meanings are retained in analogy but the new meaning of jail-bait is wholly original and sums up quite a complex idea concisely. This conciseness is a key strength of conceptual blending and often leads language to more efficiently carry meaning. As an example: ‘The tunnel under the English channel’ is never referred to as such as this does not follow the conventions of natural speech. The English Channel Tunnel is specific and natural but because there are no nearby Channel tunnels with which to confuse it, the phrase becomes ‘The Channel tunnel’. Lastly, because even more

time needs to be saved in colloquial English, people will recognise that the words ‘channel’ and ‘tunnel’ share several letters (matched inputs selectively projected) and thus the term can be shortened again (by blending) while still retaining all previous meaning and gaining a characterful nickname by simply being referred to as the ‘Chunnel’.

Conceptual blending is also required for metaphor or imaginative analogy. Take this statement as an example: ‘Margaret Thatcher would never get elected here [the United States of America] because the labour unions can’t stand her’ (Ibid., 2002, p.19). This statement forces one to analyse a scenario (that can only really exist in the imagination) and gain practical meaning for discussion of the concepts involved. The more obvious reason that Thatcher would not have been elected as president is because she is not a United States citizen. What’s important in the blend are the identified similarities. The reputation of Thatcher’s relationship with labour unions is notorious and in the context of US politics makes her electoral success unlikely in the US because of that country’s perceived value of unionisation. The statement joins two political discussions in an imaginative way that allows for new meaningful insights that, without the blend, could not exist. ‘To set up and use this blend, we need to do much more than match two analogues, which is already an awesome task. Somehow we have to invent a scenario that draws from the two analogues but ends up containing more’ (Ibid., 2002, p.20). The initial proposition is in a context that implies that the United States needs a tough, conservative, no-nonsense leader (akin to Thatcher) but that still retains values that the unionised working class would appreciate. In essence the statement imaginatively poses the idea that if the concept of Margaret Thatcher was of a different stance on certain policies then that concept of a leader would be ideal for the United States. A complex idea that is imaginatively communicated through a simple metaphorical statement. If complex differences in information can be simplified and unified like this then perhaps there is a way to guarantee this for significant and fictional information.

The above example of Thatcher causes us to imagine something unlikely to happen to make a new and real observation about the world. But what if the blend itself is internally inconsistent with reality? Some blends can contain apparently contradictory information yet most mental spaces in a blending network are internally consistent and contradictions amongst these mental spaces can actually provide useful ways to solve problems by imagining an impossible scenario (Ibid., 2002, pp.84-5). Another example Fauconnier & Turner give is of a riddle involving a Buddhist monk. The riddle describes a monk making a journey up a mountain path

one day and then descending down the same path a few days later. It then asks ‘Is there a place on the path that the monk occupies at the same hour of the day on the two separate journeys?’ (Ibid., 2002, p.39). The answer lies in imagining the monk as two separate people making both journeys simultaneously. In reality it is impossible and contradictory for one person to be in two separate places at the same time but in our imagination we are able to make an effective analogy between the monk’s two journeys and the commonplace event of two people encountering each other. We can imagine that the monk encounters themselves at a point roughly mid-way through the journey and so the monk does indeed occupy a part of the path at that same hour in both directions. Thus the correct answer is arrived at by imagining something impossible. Blends, therefore, are not constrained by what is rationally consistent with reality, what is important is that the output gives us a practical and useful tool for solving problems.

In essence conceptual blending is a way of arriving at new ideas through imaginative connections. If this process can happen with two or more source inputs then I am curious to suggest if it is possible to plug fictional information and significant information as our two inputs with a resulting blend that we might call ‘imagined information’ (as it results from our imagining a combination of significant and fictional information without being found explicitly within the text itself) (See Fig. 2.13).

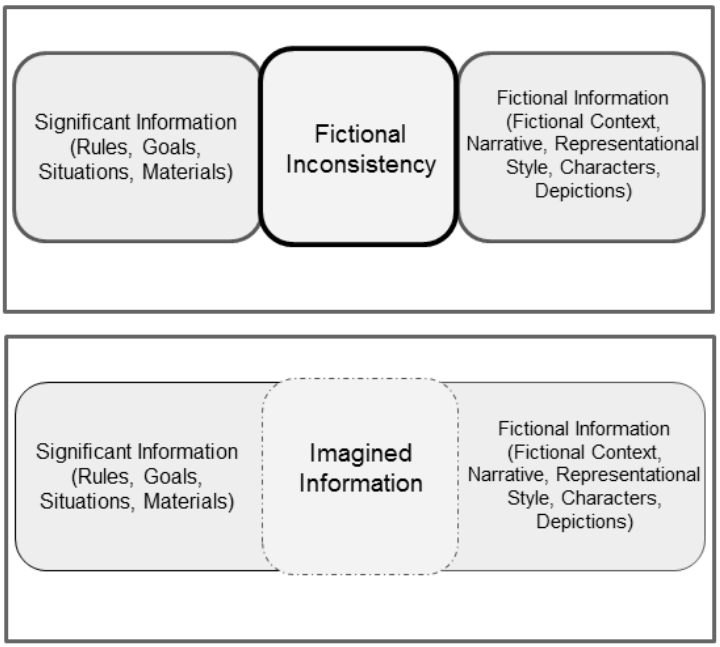

Figure 2.13 - Development of the model showing fictional inconsistencies being called to attention by the separation of significant and fictional information and the joining of information by the porous barrier of imagined information. [Author's own image].

This idea has been established in a similar form by Wolfgang Iser. In a discussion of the role of imagination in fiction, Iser proposes the duality of 'real' and fictive' be replaced by a triad; the real, the fictive and the imaginary.

> Just as the text cannot be confined to those of its elements which are taken from referential reality, so it cannot be pinned down to its fictional features. For these fictional features do not constitute an end or an entity unto themselves. Rather, they provide the medium through which a third element emerges. This is the element I have called the imaginary... (Iser, 1993, pp.1-2)

Iser's observation that imagination is a key part of fiction is not an unusual concept. Fiction is a mixture of real and fictitious parts joined by imaginative connections in both Iser and Walton's models. The problem of reality can be negotiated somewhat within a game. This blend of information types naturally leads to a third composite - imagined information. Imagined information is a new kind of information that mutually emphasises relevant connections between significant and fictional information to form a perception of the game as a holistic, functioning whole.[11] Thus we can express this idea through imitation of the conceptual integration network. Figure 2.14 shows how player imagination identifies similarities and differences from inputs (fictional and significant information) to create the resulting blend of imagined information.

[11] Festinger (1957, p.41) discusses a similar idea in relation to cognitive dissonance known as "Cognitive overlap". Supposing there is a choice that presents the chooser with anxiety. Choosing one option inevitably closes the other off to them, creating a dissonance. If, however, the two alternatives have similar features they are said to be 'overlapping'. The greater the cognitive overlap between two choices the smaller the magnitude of post-decision dissonance there will be since no loss has been made in the act of choosing (at least in the mind of the chooser). Festinger (1957, p.46) suggests this as a means of resolving dissonances of this type, to find the cognitive overlap of two different cognitive elements. Two alternatives can be made to appear as similar as is reasonable by cognising that they lead to the same result. I am proposing an in-built cognitive overlap between the different types of information in a game. This must be achieved by the designer such that the player is able to achieve cognitive overlap easily.

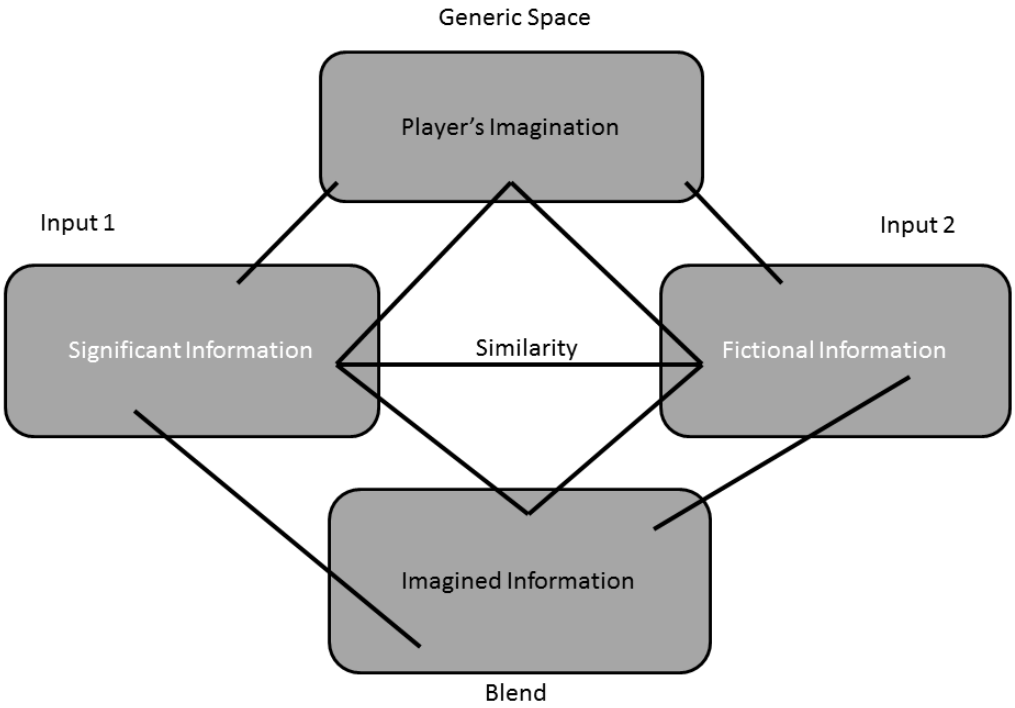

Figure 2.14 - Expression of the interaction between information types in games using the conceptual blend layout. [Author's own image].

If blends happen all the time then presumably significant and fictional information are blended constantly when a player sees what the designer has presented to them and makes assessments about that fictional world. Dysnarrativa arguably prevents blends (or perhaps causes the wrong blends) as the two inputs will often show too many important differences to be joined (selective projection does not find a good amount of relevant information to join the two). It is not so much that fictional information and significant information are not blended but that it is difficult to do so in cases where dysnarrativa is present.

Fauconnier & Turner note how some blends fail to achieve universal acceptance due to their difficulty for one to imagine. One such case is the theory of evolution which requires imagining a timescale no person can ever experience and describes a process that is impossible to observe directly. Imagining a timespan of millions of years dwarfs the feat of imagining just the scale of human history. No-one has observed the birth of a species (indeed it is practically unobservable) so the theory requires quite large imaginative leaps which some may interpret as fantastical or unreasonable. Fossil records help but still for the blend to have success as an argument it must almost deify a very complex process under the single word

'evolution'. Blends, by their nature, are conservative and often simplify and abstract meaning. Fauconnier and Turner describe how many early theories ('folk theories') are potentially oversimplified blends that must be tested through scientific investigation to determine how useful they are (Ibid., 2002, p107-8). This is why evolution can be difficult to imagine while a theory such as intelligent design will take root regardless of the validity of the concept. Arguably it is easier (whether or not it is correct) to imagine that the natural world was designed and built in much the same way humans design and build tools. Evolution has no everyday analogue on which to build our blend as it involves a timescale of millions of years and is not directly observable. This leads me to think that many games fail to make it easy for players to make imaginative connections between significant information and fictional information. Blends are strongest when they are guided to allow for easy and intuitive imaginative analogies. Thus blends are possible but most games lack a quality that makes the creation of useful imagined information likely.

This quality, therefore, must make imagined information (blends, closure and imaginative connections between fiction and significant information) much easier to achieve for a player. I term the quality as 'imaginability'[12] defined here as the quality of being imaginable. I argue that a certain quality of blends makes certain blends intuitive and memorable such as the Chunnel example and a lack of it may make certain ideas harder to swallow such as the difficulty of imagining the timescales involved in the theory of evolution. I will argue for the presence of imaginability as a prime defence against dysnarrativa as it allows for the bridge of imagined information to be laid across the gaps between fiction and significant information. In essence imaginability is a catalyst for blending, speeding up the creationg of imagined information. Imagined information and fictional inconsistency can be thought of as two types of bridge, one stable and sturdy, the other rickety and ramshackle. It is in the imagination of the player that fiction and significant information join either to reduce or increase dysnarrativa. Adjusting the model slightly we can visualise how this process occurs (See Fig. 2.15). Imaginability, like dysnarrativa, exists on the borders of significant and fictional information but is porous and allows for information to be connected. Imaginability is the functional opposite of dysnarrativa as it allows for imagined information to be created rather

[12] I was originally going to call imaginability 'significtionality' (a portmanteau of significant and fictional). This word was tricky to say and memorise and conflicted with my goal of making this thesis relatively jargon-free and relate to practical problems. Rather than coin a new term I eventually discovered (through further study into imagination) that imaginability is already a word and a much more appropriate one.

than prevent the cognitive connections that normally lead to fictional inconsistency.[13]

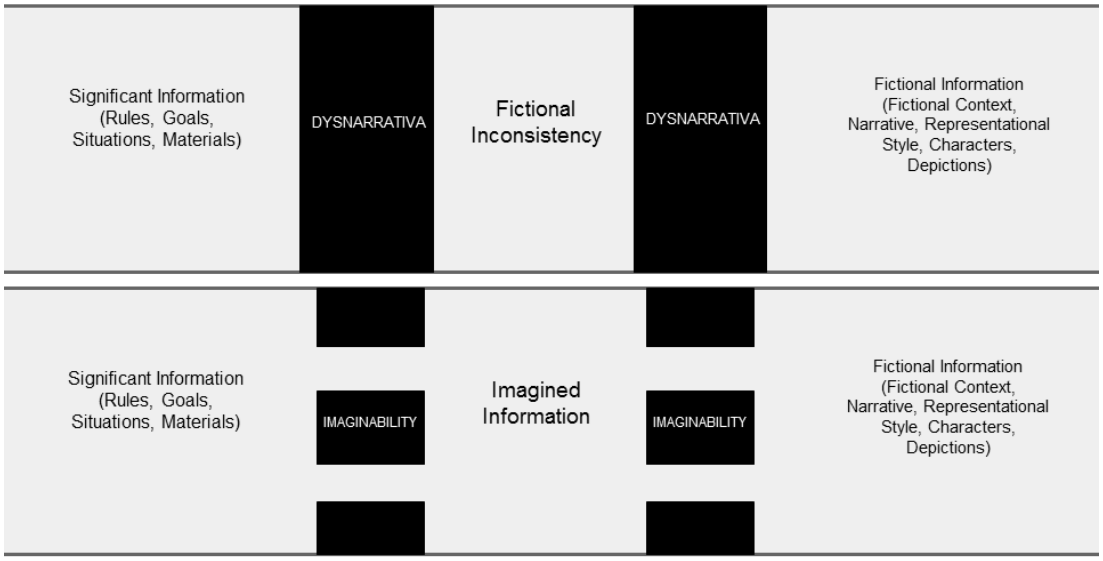

Figure 2.15 - The Imaginability Model. [Author's own image].

Conclusion: Defining the Imaginability Model

Some say music lurks in the lyre;
Why, then, closed in its case is it dumb?
Some say the sound comes from the fingers of the player;
Why then on yours do we hear none?

Su Dongpo
(Harris,1999, p.107)

[13] Perhaps it is strikingly obvious that imagination must play a part in the reduction of dysnarrativa. Indeed it has been used in stories for many centuries to bring richness, verisimilitude and detail to what are essentially imagined events. Indeed many game designers have championed it (GDC, 2016; Crawford, 2014; Quinn, 2015) but to assuage my own doubts I would like to argue for the novelty inherent in this particular discussion of imagination. Games have relatively little theoretical work that discusses them and there is also little work that takes a broad look at fictional inconsistencies across all media. While imagination is a key ingredient in good storytelling there has been very little discussion of how it factors into (what I would argue is) bad storytelling or, specifically, an inconsistent fiction. Imagination is strong because it solves so many problems that an author would otherwise have to go to tremendous lengths to comprehensively explain which may not even be helpful (this idea is discussed further in Chapter 3). It is also thought that a story must stimulate a person's imagination but there is no name for this quality that is possessed by stories that stimulates imaginations. If this thesis shows anything it is that hopefully the process by which an incomplete fiction is made whole is made abundantly transparent. If this requires obvious statements of well-known facts then so be it.

The poem above, by the Song dynasty polymath Su Dongpo (Harris, 1999), posits the unresolvable dilemma of trying to identify where music exists and there is a similar enigma concerning a game. Splitting a whole and identifying its constituent parts is difficult when that whole is more of a configured act than a concrete object. Games do not exist separately from everything else as artifacts. To pin down the discussion I chose Suits' definition of a game to guide my research.

> *To play a game is to engage in activity* directed toward bringing about a specific state of affairs, using only means permitted by specific rules, where the means permitted by the rules are more limited in scope than they would be in the absence of the rules, and where the sole reason for accepting such limitation is to make possible such activity. [my emphasis] (Suits, 2014, p36)

A game, as Suits defines it, is not an object or text but an engaged activity. Part of this activity as Walton has discussed at length is imaginative and thus a game must allow itself to be imagined. If this is true of the rules of a game then the same must naturally be true of its fiction. A game does not exist on the 'fingers of the player' or 'closed in its case'. Like music, it is something that must be enacted by a player. Fictional information and significant information do not exist separately except in the mind of one suffering dysnarrativa. Players must strive to join them imaginatively and designers must strive to aid this process. Not just for the sake of consistent fiction but for the creation of an aesthetically pleasing whole. The imaginability model has demonstrated how games (or any medium used for storytelling for that matter) must join their medium-specific significant information and their fictional worlds when aiming for fictional consistency. The best way to do this is through stimulating the audience's imagination.

The imaginability model (See Fig. 2.15) is built on the hypothesis that there are three types of information present in a game. Dysnarrativa is imagined as a thick, impenetrable barrier and imaginability is a porous membrane through which similarities identified between significant and fictional information can join. This hypothesis was inspired by early readings of ludonarrative dissonance. It dawned on me that the problem of simply opposing rules and fiction wasn't helping further a solution. Instead I asked what would happen if fiction was treated as no different from any other part of the game specified by its ruleset. Naturally this leads to the opposite question. What if rules are simply another way of representing a fictional world?[14] In many ways both propositions are true and so I thought to separate out

[14] As an interesting aside, I experience synaesthesia, a neurological disorder which causes one sensory input to be felt as another sense e.g. when I hear music I also vividly and automatically perceive colour, shape and movement in my mind's eye. This well-

the different types of information a game contains so that we might see how they fit together without the categorical bias of ludonarrative thinking. These types are referred to as significant, fictional and imagined information. Significant and fictional information are two basic types from which imagined information stems. They each communicate different things to a player but imagined information communicates significant, fictional and its own unique information.[15] Significant and fictional information are comparable to models which outline rules and fiction as being two halves of a game, much like Jesper Juul's 'half-real' model of games (Juul, 2005) or the models outlined by Dyer and Williams in their studies of musicals and pornography respectively. The attempt at presenting a third type of information, imagined information, is to create a holistic model that doesn't lead to a focus on how rules and fiction differ but rather aids in seeing where game fictions that avoid dysnarrativa succeed and how similarities in information can be emphasised through imagination. These successful cases can then be reverse-engineered to provide guidelines for reducing dysnarrativa. Thus I termed the quality a game requires in order to make this imaginative process natural and intuitive 'imaginability'. Lastly it should be highlighted that like dysnarrativa, the terms significant information, fictional information, imagined information and imaginability are not exclusive to the discussion of games as a medium but apply to all media.

It is not easy separating a game into neat little packages of information. It is only done here so that the process by which a game is blended is easier to visualise and understand. Games are highly complex texts and it is reductive to simply bisect them into game and fiction. One thing is clear, fictional consistency, which should be understood as no different to a game being wholly consistent, is solved by the game joining all of its parts in harmony. As far as can be determined, the most effective way to achieve this is for a game to be constructed with the goal of improving its imaginability.

To recap, dysnarrativa is the subjective phenomenological experience, by an audience, that a fictional world feels inconsistent in an aesthetically defective way. In addition to this we now know all the types of dysnarrativa (established in the first chapter) arise from the player unable to cognitively interpret a gap between different

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documented disorder (Sacks, 2007) is partially responsible for me hypothesising a means by which two distinct types of information might be perceived simultaneously as a whole.

[15] Imagined information therefore communicates some aspects of both fictional and significant information. This is why I define fictional information as that which *only* communicates information about the fictional world - to distinguish it from imagined information.

types of information in a game. Significant information, as we saw from our examination of musical theatre and pornography is not just the rules of a game or its mechanics, it is a medium-specific type of information that communicates ideas about a medium that are not explicit fictional statements. Fictional information is the sum total of fictional truths, depictions and representations that a given work includes. Dysnarrativa is not so much the presence of bad fictional information or the lack of comprehensive explanations but the absence of imaginability. Imaginability is a quality that means that the significant and fictional information of a game naturally and sensibly prompt players to imagine connections between parts of a game. Imaginability therefore allows for the synthesis of a third type of information dubbed ‘imagined’ information which is a blend of fictional and significant information and exists only in the mind of the player. For a game to avoid dysnarrativa I hypothesise that a game must possess imaginability to the degree that there is a high level of high quality imagined information. The next chapter will go into detail about what the key characteristics of the quality of imaginability are so that they may be deliberately and consistently replicated.

Chapter 3: Bridging the Gap: The Quality of Being Imaginable

Part 1: Context

Evidence of the falsity of a proposition imposed forcefully on one's consciousness makes it difficult to imagine vividly that the proposition is true

Kendall Walton (1990, p.15)

To pretend to light a fire, pretended matches are sufficient… As if the point was to strike a match!... What needs to burn is your imagination

Constantin Stanislavski (1936, p.43)

Imaginability - Context and Representation

In the last chapter, work was done to untangle how information is organised when a player plays a game. From this investigation it became clear that a quality in games operates counter to dysnarrativa. It prompts the player's imagination to repair gaps in consistency that are vulnerable to being interpreted as dysnarrativa. This quality, imaginability, is defined as the quality of being imaginable. Rather than a game's fiction calling attention to its artifice by way of distracting inconsistencies, imaginability allows for an intuitive understanding of how the game's fiction and its significant information (rules, goals, situations and materials) neatly mesh together. Having identified imaginability, attention turns to how to evoke and replicate it reliably in future designs. This requires elaboration with examples and for this chapter I provide a range of case studies (mostly games) that each examine some aspect of imaginability for greater clarity. Through these analyses the potential strengths, weaknesses and principles of imaginability will be revealed so that it might be repeated and recognised in the future. Conclusions about the principles of imaginability will be gathered to help reduce dysnarrativa in future designs and point the way towards any remaining discussion of how to reduce dysnarrativa.

This discussion of imaginability is related to the means of presenting information in a game which I suggest are done through two channels: context and representation. These two channels make up most of the discussion of imaginability and since they are an integral part of imaginability this chapter is split into two parts to cover context and representation respectively. Before getting into the first part I would like to define these two parts clearly.

The etymological root-definition of the word context is 'a whole woven together from numerous parts' (Jones, 2016, p.153). Context is the part of a work that, by its arrangement relative to the work, changes the meaning of that work. Thus I define context as the parts of a text which change the implied meaning of that text due to their indirect situation relative to that text. Understanding of a fiction is helped by various contextual clues some of which are intentionally employed. Optical illusions such as the Müller-Lyer illusion (See Fig.3.1.1) demonstrate how the mind can interpret false conclusions due to unintuitive representation and a misleading context (Gallagher & Zahavi, 2008, p.96). The central lines appear to be different lengths due to the different sets of arrows situated either end of them.The illusion helps show how we perceive discrete objects as wholes differentiated by their surrounding parts i.e. the central lines are the same length but one structure is

'wholly' different from the other. Gallagher & Zahavi state that ‘perception is not a simple reception of information; rather, it involves an interpretation, which frequently changes according to context’ (Gallagher & Zahavi, 2008, p.7). The way in which information is understood in games is also subject to interpretation which is primarily influenced by context. This is important as some contexts might lead one to experience dysnarrativa rather than imaginability. This chapter’s first part covers the importance of contextual relations between significant and fictional information and how to employ them towards the goal of imaginability.

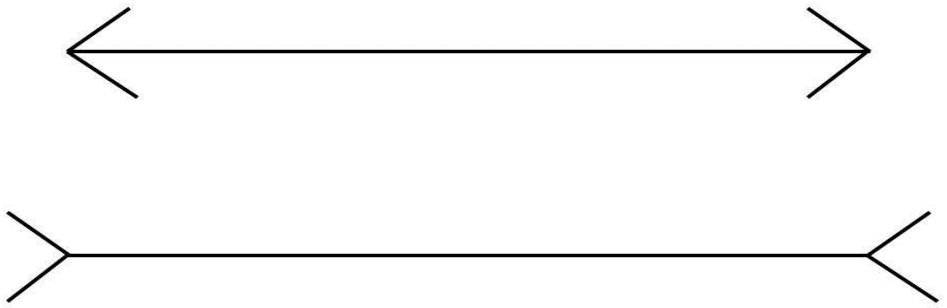

Figure 3.1.1 - The Müller-Lyer Illusion. [Author’s own image].

The second part of this chapter covers the issues presented by the representation of information. Walton’s definition of ‘representation’ is chiefly identified by *prompting* a person to imagine: ‘*Representations*, I have said, are things possessing the social function of serving as props in games of make-believe, although they also *prompt* imaginings and are sometimes *objects* of them as well. A prop is something which, by virtue of conditional *principles of generation*, mandates imaginings’ [Walton’s emphasis] (Walton, 1990, p.69). A representation therefore is a device that mandates that something be imagined. Representations, as I choose to define them, are not only visual and can also include textual or sonic representations. The Müller-Lyer illusion (as well as examples of dysnarrativa displayed in previous chapters) show the importance of representations in relating a consistent fictional world. Representations prompt imagining but, like context, can lead to either dysnarrativa or imaginability. Part 2 of this chapter examines how representations

might prompt imagining towards the goal of joining fictional and significant information so that no gap exists that dysnarrativa might otherwise fill. Imaginability connects the two sets of information in the player's cognition of the game and this is done primarily by wielding context and representation to guide that cognition.

Integrated and Dissolved Games

Jesper Juul correctly identifies level design as an aspect of games that possesses what I would term imaginability: 'The level design of a game world can present a fictional world *and* determine what players can and cannot do at the same time. In this way, space can work as a combination of rules and fiction' [Juul's emphasis] (2005, p.163). Further to this he states: 'Level design, space and the shape of game objects refer simultaneously to rules and fiction. This is a case in which rules and fiction *do* overlap' [Juul's emphasis] (Juul, 2005, pp.188-189). As an example, if there is a fence that physically blocks the player in the world then ludically the fence prescribes a rule that the player cannot walk through the fence. The fence is also fictionally a fence and its depiction prompts the player to imagine that a fence exists in this fictional world and all that implies. This dual nature of level design is usually unremarkable as the connection between significant and fictional information is made automatically and effortlessly. The physical layout of a game level naturally makes fictional statements.

I would like to take this principle of level design a step further and consider how world design operates in games and how imaginability can be used to support it. To do this I would like to employ some of the terminology covered in Chapter 2. The three types of musicals (as recounted by Taylor (2012)) presented a useful way of thinking about how fiction relates to musicals. The terms 'separated', 'integrated' and 'dissolved' refer to the different ways in which significant information may connect to a fictional world in a given work. To clarify, separated games are those where the fictional information and significant information are divorced from one another and so the game lacks imaginability and, by extension, imagined information. Integrated games and dissolved games are those where the fictional and significant information are joined to create a mostly consistent imaginable world. 'Dissolved' describes integration that is so all-encompassing that even seemingly abstract game mechanics are simply another part of a stylised fictional world. For the purposes of elaborating on world-building in games, I will apply these

terms to several case studies.[16] I propose *Dark Souls* (From Software, 2011) as an example of an integrated game and *Beat the Beat: Rhythm Paradise* (Nintendo SPD & TNX Music Recordings, 2011) as an example of a dissolved game.

Dark Souls is set in a dark fantasy world which tasks the player with exploring a dangerous and dying world that exists in the aftermath of various conflicts between dragons, gods and humans. A key plot device in the game is the existence of a curse of the undead. This curse spreads much like a disease and the player begins the game locked in an asylum to which the cursed are sent. The curse's main symptom is that the cursed person cannot perish upon death. Instead they resurrect near bonfires, doomed to undeath. This process of continually dying takes its toll on various characters in the world, often resulting in them losing their sanity. If a cursed one completely loses their sanity then they become 'hollow', a hostile, undead shell of a person.

This curse makes for an intriguing plot device in *Dark Souls* but it also has significant, mechanical implications. Since the player character is cursed they cannot die in the permanent sense and will always return to a bonfire (functionally the checkpoints of the game) upon 'death' - fire being implied to be the magical source of all life. This shows a remarkably rare case of player character death and apparent resurrection being given a fictional explanation. This is not to say that every game system must be explicitly tied to a fictional explanation, only that the player is directed towards a potential explanation rather than their imagination be left frustrated by a lack of information.[17] Cursed ones are also branded with a darksign by which they are recognised. This darksign, a symbol featured in the *Dark*

[16] I must stress that the original usage of these terms differs somewhat to my own usage. The original usage, by Dyer (1992, p.28), was meant to help categorise how musicals operate. I am employing the terms here to emphasise how imaginability operates in games.

[17] Other notable explanations are given to account for game systems that normally go unexplained. At one point the player's character meets Solaire of Astora a knight who introduces the summoning mechanic whereby players can summon, or be summoned by, other players with a 'soapstone' to help one another. To explain this Solaire states that

> The flow of time itself is convoluted; with heroes centuries old phasing in and out. The very fabric wavers, and relations shift and obscure There's no telling how long your world and mine will remain in contact. But, use this [white soapstone], to summon one another as spirits, cross the gaps between the worlds, and engage in jolly co-operation! (From Software, 2011)

This accounts for how enemies reappear upon sitting at a bonfire, how players are able to join the worlds of other players and also speaks, fictionally, to the disturbed situation of the world.

Souls logo, is also a usable item within the player's inventory. Upon 'using' it, players will die losing all their accumulated souls and humanity (two forms of currency in *Dark Souls*) and resurrect at a bonfire. Interestingly, using it is almost never advantageous, it is almost always preferable to die in the conventional way.

In *Dark Souls*, death features prominently as a theme and as a ludic event. To strengthen this connection the conceit of the curse of the undead resolves tensions relating to the apparent resurrection of the player-character upon death. Juul (2005) recalls an example of such a tension in the explanation players give for Mario's ability to apparently resurrect through the use of extra lives in *Donkey Kong* (Nintendo Research and Development 1, 1981). He argues that, while the fictional world of *Donkey Kong* is fairly simple to imagine (a gorilla has kidnapped Mario's love interest):

> It is harder to understand why Mario has three lives: Being hit by a barrel, by a fireball or by an anvil should reasonably be fatal. Furthermore, the player is rewarded with an extra Mario at 10,000 points. This is not a question of Donkey Kong being incomplete, but a question of the fictional world being *incoherent* or unimaginable. While, technically, any world can be imagined, and we could explain Mario's reappearance by appealing to magic or reincarnation, the point here is that nothing in Donkey Kong suggests a world where people magically come back to life after dying. [Juul's emphasis] (Juul, 2005, pp.123-130)

Death (and the implicit structural repetition that follows) is rarely factored into the fictional world in a game. If anything it is the most common disruption of a player's experience of fiction (Tocci, 2008) (as I determined in Chapter 1). One of the earliest examples of a designer acknowledging this effect death has on games can be found in the *Zak McKracken and the Alien Mind-benders* (Lucasfilm Games, 1988) manual where the Lucasfilm game design philosophy reads:

> We believe you buy games to be entertained, not to be whacked over the head every time you make a mistake. So we don't bring the game to a screeching halt when you poke your nose into a place you haven't visited before. In fact, we make it downright difficult to get a character "killed". We think you'd prefer to solve a game's mysteries by exploring and discovering. Not by dying a thousand deaths (Moriarty, 2015).

Brian Moriarty (2015) points out that Lucasfilm did this to best competition at the time and as an act of good will towards players who were often given intentionally frustrating puzzles to pad the play time of relatively expensive graphic adventure games. However, the relevant point is clear that death can be distracting. Failure necessarily commands the attention of the player and so can take attention away from the fictional world. Game designer David Cage notes how he finds 'game over'

screens distracting when considering the narrative and offered another approach to reconciling failure with fiction (Academy of Interactive Arts & Sciences, 2017). In David Cage's game *Heavy Rain* (Quantic Dream, 2010), players control four characters involved in a murder mystery. The player's choices and skill determine the outcomes of the narrative and if a playable character dies, the narrative continues another character's story without them. There is not just one path to incorporating the structural quirks of games into their fictional worlds but player failure is tricky to account for. The graveyards and resurrection mechanics in *World of Warcraft* are highlighted by Klastrup (2008) as another example of death being aesthetically incorporated into the fictional world.

Dark Souls would seem to provide an explanation for what is left as incoherent in *Donkey Kong* and the games that Lucasfilm derides. Juul notes player's responses to this case of dysnarrativa in *Donkey Kong*: 'In an informal survey of Donkey Kong players, all players explained the three lives by appealing *to the rules of the game*: With only one life, the game would be too hard' [Juul's emphasis] (Juul, 2005, p.130). Juul follows this train of logic to suggest that as long as we focus on the rules, the game is not incoherent, we merely shift the discussion to rules. This is highly unsatisfying as a solution as we are then liable to dismiss major aesthetic problems as a game simply belonging to a category of 'incoherent games' rather than devising a solution. It is also arguable that if we cared only about the rules of the game we would not bother to judge the fiction one way or the other. *Dark Souls* shows that it is possible to marry constant death with a consistent fiction and so we might ask what is stopping any game from achieving this rare feat? In any case it is clear that *Dark Souls* is providing imaginability through its explanations for how death operates in its world. We could say that *Dark Souls'* fictional and significant information are integrated in much the same way Williams (1999) states 'narrative' and 'number' can be in pornography or as Dyer (1992) does in musicals.

Beat the Beat: Rhythm Paradise (hereafter referred to as *Rhythm Paradise*), on the other hand, features a universe that is dissolved. The game's fiction revolves almost entirely around the mechanics and goals of the game. In *Rhythm Paradise* the player plays through various rhythm-based minigames that require them to tap out a beat or repeat a call-and-response rhythm. These minigames usually feature a framing device that gives context for the action they must perform. The subsequent fictions that result from these framing devices are usually absurd or comical but still help the player intuitively understand the game. One infamous example is set during an interview with a professional wrestler.

‘Ringside’ has the player control a wrestler’s responses during a post-match interview (See Fig. 3.1.2). They have three responses that are all rhythmically signalled by a fictional occurrence. If the interviewer asks a question (via a pseudo-nonsense rhythmic refrain: ‘wubba-dubba-dub, is that true?’) to which the player must nod to, on the beat, by pressing a single button. If the interviewer expresses enthusiasm for the wrestler (indicated by her statement ‘Woah, you go, big guy!’) the player must tap the button twice in quick rhythmic succession to raise the wrestler’s arm and perform a bicep flex. Lastly if the crowd of journalists yells ‘pose for the fans!?’ the player must press two buttons simultaneously to pose for a picture, again on the beat of the accompanying musical track.

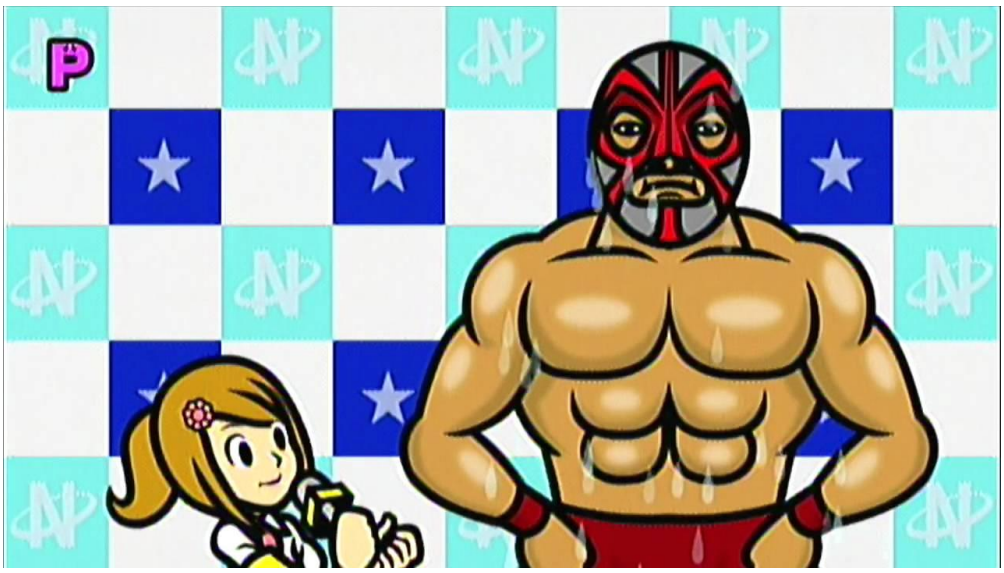

Figure 3.1.2 - Wrestler interviewed in ‘Ringside’ from *Rhythm Paradise*. by Nintendo SPD & TNX Music Recordings (2011)

Another example from *Rhythm Paradise*, ‘Double Date’ involves a couple of high-school students on a date near a sports field (See Fig. 3.1.3). For whatever reason, the female student is fascinated by a couple of weasels in the ground nearby. As the couple sits on the bench various types of ball bounce from the sports field and threaten to startle the weasels which in turn upsets the girl potentially ruining the date. The player plays as the male student and is required to kick the balls away so as not to disturb the date. Each ball’s bounce denotes a particular rhythm which the player must ‘kick’ the last beat.

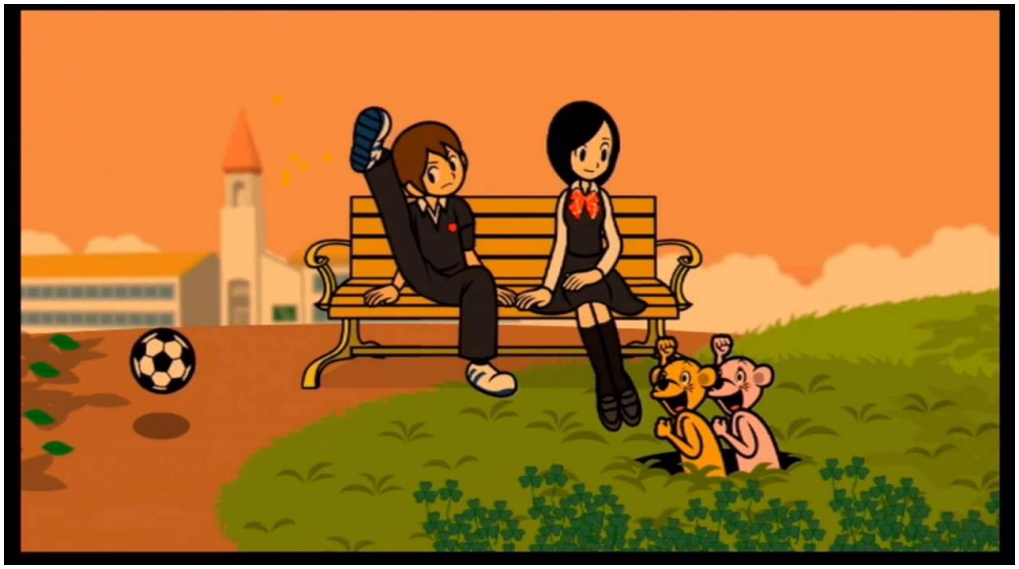

Figure 3.1.3 - Kicking balls in ‘Double Date’ from *Rhythm Paradise*. by Nintendo SPD & TNX Music Recordings (2011)

Rhythm Paradise’s fictional set-ups are very simple but allow for an entertaining frame in which to understand the purely formal rhythmic challenge of the game. While it could be argued that the fiction doesn’t make sense (the Ringside reporter’s comments are gibberish) one has to look at the context in which the fiction takes place. *Rhythm Paradise* (to the extent that it presents a continual fictional universe) concerns a fiction which surrounds rhythm in a highly unrealistic manner. However, realism is not the same as consistency (although they are related in some cases of dysnarrativa). One clue to this is how the beginning of the Ringside game shows an establishing shot of the stadium where the interview takes place. As the music starts up the entire stadium literally pulsates to the rhythm of the beat. This is not realistic but it shows how the significant information of the game naturally flows alongside its fiction. Indeed they are dissolved. Not only does the fiction and significant information inform each other (as is the case in *Dark Souls*), they are related so much that the fiction is essentially overtaken by significant information, giving it an abstracted and quasi-fictional status. It is simply a natural part of this world for rhythmic movements and situations to unfold in everyday events. *Rhythm Paradise* does not seem realistic or sensible when assessed alongside our reality but it is certainly internally consistent when observed in its dissolved context. Games that suffer from dysnarrativa will suffer regardless of the context you view them in (although there is something to be said for what the outer limits of subjective interpretation may be but for now we can appeal to Walton’s silly questions for guidance in these edge cases).

Rhythm, as we know, incorporates repetition, one of the hurdles to clear to achieve fictional consistency in a game. Repetition has been acknowledged as a structural certainty and potential problem in various areas of game design (Kirkpatrick, 2011, pp.186-187; Grodal, 2003; Andersen, 2016; Quinn, 2015). Grodal in particular stresses the repetitious experience of a video game as similar to the same repetitive requirements of musical appreciation:

> ...this aesthetics of repetition is based on the sequence: first unfamiliarity and challenge, then mastery, and finally automation. The experience is thus in some respects similar to the way in which we enjoy music—musical appreciation is also strongly based on repeating the listening process until it has reached a stage of automation. (Grodal, 2003, p.148)

Rhythm Paradise taps into repetition in a natural way. *Rhythm Paradise*'s mini-games all account for the need, fictionally, for their to be a depiction of the repetition the player mechanically engages in - in this case it is the rhythm of the game's music. Ringside uses the frame of an interview, an event likely to have its own structural repetitions (e.g. question, response, question, response, photo opportunity etc). Double Date (while it makes little sense in a comparable real-world scenario) is set-up so that a repetitive series is plausible and will require an equally repetitive series of actions (being set near a sports field, balls are likely to interrupt the date and since balls are most quickly removed by kicking them, the player and character are called upon to kick them away). *Rhythm Paradise* features a world that is completely about rhythm, and thus repetition. Each character is wholly involved in some musical or rhythmic activity regardless of an explicitly musical context. Even nature itself is shown to be rhythmically motivated (in minigames such as Micro-row where bacterium pulsate to the beat). The fictional and significant information here are totally aligned and thus we can say that *Rhythm Paradise* is a dissolved game.

Dark Souls and *Rhythm Paradise* are prone to imaginability, seemingly because they frame their fictional information and significant information so that they are congruent. Frames are useful if they can be related to the structural qualities of games, namely repetition and death/failure. If a fictional world can account for these in some way then the world will be more naturally imaginable alongside the game it is featured in. This is not to say that every fictional world in a game should focus on death or repetition but should be able to offer plausibly imaginable reasons for the structural features of games. Repetition, for instance, does not prescribe worlds just like that of *Rhythm Paradise* where every fictional depiction is slavishly in service of repetitive rhythms. Rather a game should have plausible reasons why the same

enemies, actions and objectives keep occurring, and these reasons should factor into the world-building itself. Repetition is not appropriate to fictionalise in *every* case. Plausible circumstances in a game should cue imagination to interpret repetition as natural. Repetitive dialogue, animations, level design and many other repetitive aspects of games all risk incurring dysnarrativa.

From this examination of integrated and dissolved games there are a couple of principles that can be drawn up. Integrating the structural qualities of games themselves (commonly death/failure and repetition) with their fictional worlds can lead to greater imaginability as is the case with *Dark Souls* which gives a fictional context to its significant information. Games can also dissolve fictional and significant information to achieve imaginability by thematically constructing the game around its significant information, as *Rhythm Paradise* does. This discussion also suggests that the concept of framing may be fruitful to explore.

Integration Principle - Creating a fictional world in which structural qualities of games (commonly repetition and death) are fictionally integrated aids imaginability.

Dissolution Principle - Creating a fictional world in which fictional information is thematically constructed around significant information aids imaginability.

Framing

A concept drawn from sociology, framing, can be thought of as a conceptual theme that people unconsciously employ to organise information so that they can quickly and simply understand ideas. Erving Goffman (1974, p.22) notes their use, by people, in social activity and physical science as a means of establishing context. Social etiquette is one such example of a social framework that determines an appropriate context for certain types of behaviour. Fine has noted how frames may be used in games to construct ‘finite worlds of meaning’ (Fine, 1983, p.181). He cites Goffman who, Fine says, ‘defines a frame as a situational definition constructed in accord with organizing principles that govern both the events themselves and participants’ experience of these events’ (Fine, 1983, p.181). While I do not intend to use frames as they are understood generally in sociology, I would like to emphasise the qualities of frames specified above. Frames are a means of organising experience around a concept that brings an accordant context to the

forefront of imagination.[18] Given that dysnarrativa is a problem which requires joining radically different types of information to solve, frames serve as a good candidate for organising the two. I believe frames are useful generally as they form a key component of making something imaginable. The principles so far suggest a specific way of organising information to achieve imaginability which is similar to framing and here I would like to examine if game fictions (or specifically player's interpretations of them) benefit from framing.[19]

The first case to consider is not a game but a chatbot called *ELIZA* (Weizenbaum 1966) which was created by Joseph Weizenbaum while at the Massachusetts Institute of Technology between 1964 and 1966. *ELIZA* was an attempt to create a program that could convincingly interface with real people by building the illusion that *ELIZA* was either a real person communicating through a terminal or an exceptionally advanced natural language processor. The program takes on the role of a psychotherapist asking questions about the user through a chat interface and responding appropriately. Such a dialogue between user and program plays out as follows:

> 'Patient: My boyfriend made me come here
>
> ELIZA: Your boyfriend made you come here?' (Murray, 1997, p.69)

In Chapter 8 of her book, Murray (1997, p.214) explores chatbots in-depth. Beginning with early chatbots such as *ELIZA*, Murray shows how chatbots succeed and fail in their attempts to appear human in order to pass the Turing test. In some cases the chatbots not only create consistent and believable fictional characters, but interactive characters that resist dysnarrativa. Despite imperfections, the chatbots are shown to work as fictional texts under the right circumstances which demonstrates a working example of imaginability. The Eliza effect, as it is known, is a phenomenon that occurs when people attribute a machine with more intelligence

[18] Goffman (1974, p.43-45) mentions that frames specifically change context when they are 'keyed'. Keying is how frames are understood but in different contexts. For example, fighting and play-fighting amongst animals fall under the same framework of 'fighting' but are understood as different keys. Goffman emphasises a musical analogy i.e. a piece (frame) can be understood in a different key (context). When something is 'keyed' it is usually meant as a non-serious or make-believe variation of that frame. It is worth discussing the roundness of Goffman's distinction between frames and keys for clarity but, for the sake of simplicity, I will be using the term frame to indicate a specific, themed context for understanding information in a game.

[19] Deterding (2009) has also employed Goffman's concept of frames when discussing games but primarily focuses on sociological concerns and contexts within game studies rather than how game fictions might be better understood.

than it really has and has been used to great effect in game design particularly in convincing players that AI are more advanced than they are.[20]

In a sense, *ELIZA* is a program that prompts one to imagine that it is a real person. *ELIZA* takes on the role of a psychiatrist that responds to the user with context-sensitive questions. For instance if a person makes a statement to *ELIZA*, the program will try and rephrase their statement in the form of a probing question, prompting further dialogue. One extract reads:

> Eliza: Tell me more about your family.
>
> Patient: My mother is very motherly.
>
> Eliza: Who else in your family is very motherly?
>
> Patient: I am very motherly.
>
> Eliza: Is it because you are very motherly that you came to see me? (Murray, 1997, p.73)

Also of note is the anticipation of *ELIZA*'s creator to specific queries that are likely to be asked. If these queries are not addressed then the whole illusion of *ELIZA* seeming real may be broken. Below is an example of a well-anticipated query by *ELIZA*'s designer that still fits the frame.

> Patient: Do you need a mother?
>
> Eliza: We are discussing you, not me. (Murray, 1997, p.73)

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[20] In a technical review of the game *F.E.A.R. First Encounter Assault Recon* (Monolith Productions, 2005) AI designer Alex Champandard (2007) details a list of principles, drawing from fellow designer Jeff Orkin's (2006) notes, that aid strong artificial intelligence design for games. The technique, listed as number 20 in Champandard's article, relies on the players' assumptions to enhance their experience:

> The AI behaviors use communication only to signal their intended behavior. This in itself creates an illusion of intelligence, even if the logic to implement the behavior does not exist. This is good enough to fool the players.
>
> "For example, when an A.I. realizes that he is the last surviving member of a squad, he says some variation of 'I need reinforcements.' We did not really implement any mechanism for the A.I. to bring in reinforcements, but as the player progresses through the level, he is sure to see more enemy A.I. soon enough. [sic] [quote from Orkin, 2006]
>
> This trick relies on the players' assumptions to enhance their experience. It's a human tendency to extrapolate and find patterns even if they are not explicitly designed that way. (Champandard, 2007)

This is an example of the Eliza effect being used in design to achieve imaginability.

Like a stereotypical psychotherapist, *ELIZA* repeats statements as questions and redirects the conversation on to the 'patient' as a way to prompt them into opening up. The framing device of a therapy session makes the program seem remarkably good at interpreting the situation it is in but this is not the case; *ELIZA's* skill is simply an illusion. Murray (1997) describes *ELIZA* as 'the first completely, computer-based character' as if the program is a fictional world in which the user plays at being a patient. Even though *ELIZA* is not a game (although it can be used to play one) it shows an early example of a fictional character appearing seamless thanks to the system working under a well-framed fiction. *ELIZA* was so compelling in its role as a therapist that members of Weizenbaum's staff requested to speak to it for fun and even therapeutic reasons (even staff who knew that it was just a program). While Weizenbaum's program can be misunderstood as more advanced than it really is the quality of its consistency obviously captures the imagination in a powerful way (to the extent that some mistakenly believed the program to be a real therapist). If *ELIZA* didn't have this frame and was simply presented as interactive software these powerful imaginative connections are unlikely to happen. Framing partially derives its strength from contextual relationships between information. These relationships are exploited in analogous examples such as the Kuleshov effect in film, Dyer's (1992) integrated musical, McCloud's (1993) 'closure' in comics, the idea of believability in animation (Thomas & Johnston, 1997) and Fauconnier & Turner's (2002) conceptual blend theory. Context is an important part of framing and, therefore, creating imaginability.

ELIZA also shows that a fiction does not need to be completely comprehensive in order to avoid inconsistency. *ELIZA* works mostly because of how its users infer information about the program which has a very stable frame of a psychiatry session but incomplete information (i.e. *ELIZA* does not have a response for every specific query). *ELIZA* can be broken quite easily if one acts outside of the frame. However the frame also acts on the user which reduces the chance of the user deviating from the author's anticipated responses. If a player identifies the frame they may behave in a way appropriate to that frame. *ELIZA* players may be less likely to deviate from the intended psychotherapy session purely because they are aware of it as a framing device. Frames thus potentially aid in reducing cases of dysnarrativa where the actions of the player may clash with the plan of the designer. The Eliza effect is a phenomenon that results from persuasive frames and I propose that designers use frames to wield this tendency of the mind to produce imaginability. It is invisible, automatic, effortless, stimulated by relatively little

information and blooms when frames are in place causing us to identify convincing patterns where none exist (Fauconnier & Turner, 2002, p.108).

Figure 3.1.4 - The Original Atari *Pong* Arcade Cabinet. by Sylvain De Chantal (2017).

A game which uses a similar principle of a stable frame is *Pong* (Atari, 1972). Like *ELIZA*, *Pong* was highly successful in engaging people. *Pong's* 'fictional world' is an abstract representation of a game of table-tennis (See Fig. 3.1.4) in which the goal is to score eleven points against an opponent. Players are represented by and control tall white blocks (paddles) against a black background with each player's score displayed above their half of the playing field and a dotted line down the centre of the screen dividing the 'court' evenly in two. Atari frontman Nolan Bushnell initially ordered production of the game as a test project and that: 'The game should be very simple to play-"one ball, two paddles, and a score.... Nothing else on the screen."' (Kent, 2001, p.40). *Pong* benefits from its resemblance to racket-based ball games like squash or table-tennis. Consequently it was easily understood by those not already interested in early computer games or even more abstract games which lacked a fiction or possessed highly esoteric fictional worlds. Thus the frame of 'table-tennis' aids imaginability.

In a way *Pong* takes an easy route in being an abstract fictional representation of another game that is very similar in form to *Pong*. The fiction in this case is already a game so to understand *Pong's* 'world' takes very little effort. *Pong's* rules and

goals also resemble the base game, table tennis. In this way *Pong* both visually and ludically resembles table-tennis. Even the name of the game implies a shared lineage with Ping-Pong/table-tennis. Thus it is an excellent example of significant information (the rules of table tennis and *Pong*) harmoniously unifying with fictional information (the abstract representation of a game of table-tennis). This is thanks to the fictional frame that *Pong* presents which helps to generate imaginability. Without a frame *Pong* is simply an abstract game involving blocks and pixels. If we were to describe the rules of *Pong* as 'move your block so that the moving pixel does not enter your scoring area' the experience is abstracted too much for all but the most ludically-driven player. Games are not limited to just one frame either but some might make more sense than others. If, for instance, *Pong's* fiction was such that the two paddles represent two atoms bouncing a particle back and forth while a computer keeps count of how many times a particle escapes, the fiction is understandable but raises more questions than it settles. A table tennis match is more appropriate, intuitive and consistent with what a player knows about the significant information in the game. The frame is valuable in communicating both the game's significant information and a (admittedly limited) fictional world. This is not to say fiction is just for making a game accessible. The important thing is that fiction must compromise for the sake of the frame which, in this case, leads to Pong fictionally explaining its rule through the frame of another game.

Pong's frame operates differently to *ELIZA's* and there appear to be two routes to take when it comes to frames. Either the frame is more specific and gives context to the fiction and potential interactions e.g. *ELIZA* is framed as a psychotherapy session thus the dialogue and the player's interpretation tends to follow this frame. Or the frame is more general and gives an abstract version of a simple and well-known idea which has compromised to fit the abstract nature of significant information e.g. *Pong's* fiction and rules are a less complex form of table-tennis. In order to imagine something it helps to have a reference point from which to build. Most fictions generally take time to establish themes, setting and characters which aid in our understanding of that fictional world. Frames are a foundation for more complex ideas. The frame, as an organisational device, is discussed in Fauconnier and Turner's (2002, p.40) work on conceptual blending. Fauconnier and Turner note that frames help organise a conceptual blend by restraining and simplifying the range of relevant inputs.[21] In *Pong's* case this means that the frame actually dictates

[21] The more specific the frame, the more organised the blend will be. The specificity is relative. Most blends are simple and abstract, it's just that some are more specific than

that significant and fictional information are constrained by each other. Significant information must meet a fictional context and fictional information must compromise by abstraction where possible. Thus frames provide mutual abstraction (fiction usually has to conform in part to the abstract nature of significant information) and specific contextual clues to aid the imagination.

Another potential benefit of framing is that it directs a player's focus. While this doesn't sound very remarkable, consider the fact that focus on one thing subtracts focus from other things. Focus only on the word highlighted in **bold** here. Notice that you can perceive that there are other words in your visual field but you cannot read them as easily unless you shift your focus. A similar thing happens conceptually when employing a frame. This is because focus causes inattentional blindness and the human brain is most receptive to stimuli that capture its attention (Gallagher and Zahavi, 2008, pp.97-98). If the frame of a game is obvious and unambiguous then it is less likely we will lose focus and may even be inclined to ignore information that may lead to minor dysnarrativa.

ELIZA and *Pong* thus demonstrate an important principle for fictions that must be tied to significant information. A stable framing device that both represents a fiction while simultaneously communicating the game's significant information in a consistent and intuitive way will help create imaginability. Frames are often quite simple and admittedly the more complex a game or fiction becomes, the harder it becomes to tie the two together. However, the salient point here is not how difficult imaginability is to achieve but how best to achieve it.

Frames seem to operate under two principles: Firstly, frames organise information in a game under a simple theme. This is because ideas that take root often follow the path of least resistance. Their simple nature requires that information combined under a frame be similarly restrained. This is not so much a problem for significant information which tends to be abstract already (this is discussed further in part 2 of this chapter). The simple nature of frames requires that fictional information must compromise in some cases where it is to be joined with significant information. This often means that fiction must be simplified or abstracted to point of sufficient consonance with significant information. Secondly, frames are a way for providing

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others e.g. the concept 'competition' is more abstract than 'boxing' or 'cockfight' (Fauconnier and Turner, 2002, pp.103-6). Table-tennis is specific for *Pong's* purposes but the word 'table-tennis' alone is relatively abstract as a tool for prompting imagination. This is why I emphasise abstraction or simplification as a benefit of frames. Frames organise information so that imagination is prompted to act moreso than they directly inform us. That is the job of the game's significant and fictional information.

context for a game's information. Fictional information often provides that context, organised under a frame. Since significant information is abstract it stands to gain the most from a fictional context as purely abstract information, especially in a complex fictional world, will often call attention to itself.

The two principles of frames fit quite neatly with the idea of there being integrated and dissolved games. Integrated games, like *Dark Souls*, provide a thematic fictional context for the significant information in the game. *Dark Souls'* death mechanics operate under a frame of death which gives a fictional context to a structurally common aspect of games (failure, usually by death). Dissolved games, like *Rhythm Paradise* or *Pong*, utilise the second principle of frames. The fictional world is abstracted to compromise for the abstract significant information in a game. *Pong* does this by fictionally resembling another game whereas *Rhythm Paradise'* world is almost entirely dominated by a frame of rhythm. The two principles are not mutually exclusive for every case and it may be that both processes are continuously happening for every game that achieves imaginability.

Frame Principle: A stable frame aids imaginability by focusing attention on relevant information to be imaginatively joined and away from irrelevant information

Framing Principle: A frame is created either:

By providing a thematic context for the significant information in a game e.g.

or

By the abstraction of fictional information in a game

Functional Fiction - The Role of the Dice

In *Unit Operations* (2006) Ian Bogost attempts to establish a framework for analysing video games, drawing upon literary theory and concepts from information technology. Bogost also confirms that there is a need, in games, for a certain amount of consonance between their subjective fictional worlds and their more apparently 'objective' rules. He also notes the difficulty of reconciling this with current literary and information technology theory. Bogost often compares videogames to simulations when discussing them, employing terms from computer science to address how literary theory and systems design might be united. Bogost introduces the concept of 'cellular automata' which describes a group of automata

which by themselves all perform simple functions under very basic rules and together are capable of complex emergent properties (such as John Conway's '*Game of Life*' (1970)). Simulations, and by extension many games, share this systemic structure whereby rules are fairly objective and simple by themselves but when these rules are placed together there is a growth in complexity of the entire system. Dysnarrativa relates to this concept since it is the result of difficulty in establishing a consistent subjective fiction alongside a series of individually objective rules and other significant information. Potentially the growing complexity of modern games makes it increasingly harder to root out fictional inconsistency within them. As fictional information increases in complexity so too does the potential for inconsistencies. We will see that framing is not enough by itself to produce imaginability in more complex fictions.

While framing creates a space that indirectly prompts players to imagine connections between fictional and significant information, there also needs to be a more reliably direct way of connecting the two. One way in which the two are linked, much like Juul's example of level design, is through roles. Games contain rules but fictionally there are also roles which players take on. Roles, traditionally portrayed by actors in plays, describe fictional characters to be portrayed. In games, roles are this but also a generic set of conventions and rules that describe very specific ways of playing. Many games employ different roles in communicating the rules of a game fictionally such as *Chess* (Trad., c.840-850), *Team Fortress 2* (Valve Corporation, 2007) and the dice as a tool in play and games.

In *Chess* there are several playing pieces each with rules that describe how they can be moved. For simplicity let us focus on the rook. The rook can only be moved horizontally and vertically along adjacent squares and as many spaces as the player likes unless an opponent or the edge of the board is reached. The rook also has specific rules for 'castling', the only move in which two pieces can be moved simultaneously (although it varies with different iterations, castling was introduced c.1560AD in Spanish and French variations of the game (Gizycki, 1977, p.67) and in some cases had to be carried out in two moves (Matthews, 1948, p.16)). It involves moving the king two spaces towards the castling rook (as long as there are no pieces between king and rook) and moving the rook to the space immediately adjacent to the king and opposite to the side the rook was originally occupying. This is usually done to move the king into a defensive position. The rook has also had previous increases in power alongside the queen. Up until the 1200s the rook was only capable of moving 2 spaces at a time but was given unlimited range which has

been the case ever since (Gizycki, 1977, p.67). This would have made it by far the most powerful piece up until the queen's current powers were granted in the middle ages to make the game move more quickly. As a result it is unsurprising that the rook's fictional, and significant, role is reflected by the relative power of war machines in relation to individual soldiers i.e. pawns, knights, bishops.

Like other Chess pieces, the rook has been fictionally represented as many things. The word 'rook' is a mutation of the original Persian name for the piece '*rukh',* meaning '*chariot*' (Matthews, 1948, p.9). The role of the rook has varied depending on the culture that describes it. Early military forces would have large bulky chariots or other '*machina'* of war that resembled fortifications and, like the piece, they would have generally moved in only one direction whilst charging in battle. Later, alongside the common practice of siege warfare, the rook would likely be thought of as a siege tower, another powerful but unidirectional force. In Russia the modern name for the rook is derived from the Persian-Arabic word *ladia* meaning boat, presumably a warboat (Gizycki, 1977, p.16). A modern rook resembles a crenellated castle turret, a stationary immovable object, and yet it moves. In Germany the rook is known as a '*turm*' meaning 'tower'. The act of castling may have been in response to the piece's fictional depiction as a castle so that the strategy is fictionally to hide the king behind or in his castle. Gizycki notes that this interpretation of castling may have been a concept that took root with players: 'Castling was in many places given a name wittily based on the idea that king fled from his foes into the kitchen' (1977, pp.67-68). *Chess'* fictional component can be seen in other rules such as the win condition of *Chess*, also documented by Gizycki: 'Whereas victory commonly implied massacre, it has come to be accepted when one side has the enemy leader completely in its power' (1977, p.68). This is in reference to the abolition of a win condition involving a 'bared king' where victory could be achieved by eliminating all opposing pieces except for the king, instead of requiring checkmate.

Chess' abstract nature means that the fiction of the game is both simple (two opposing kingdoms) yet ambiguous given the different things each piece can represent.[22] The frame, in *Chess'* case, is an abstract one of medieval warfare which informs us of the nature of the rook's role. While the rook has been represented as many things it has always had some universal features in its many

[22] In a variation known as 'Great Chess' devised by the Mongolian conqueror Tamerlane, many fictional roles were incorporated by eleven different playing pieces including camels, elephants, giraffes and war-machines (Gizycki, 1977, pp.71-72).

depictions. It is sturdy, powerful, one-directional and dominates large parts of the battlefield. Rooks are incredibly powerful end-game pieces and two can be used to effectively (and maybe fictionally) imprison an opponent's king. The key takeaway from the rook is that while the rook may be a longboat, chariot, siege engine or tower, its significant characteristics have always fitted its fictional depiction.

This continues to be true of rules in modern games. The concept of classes in role-playing games, first-person shooters and other types of video games is roughly analogous to roles. Classes describe generic functions, limitations and optimal playstyles that are often tied to fictional depictions. The level of abstraction can be quite great as is the case with the 'tank' a term that generally refers to a player role that draws enemy attention to itself and takes massive amounts of damage whilst other classes dispatch those enemies. Tanks are not a class as such but describe a basic function. A more specific class which also has a more specific fictional depiction would be the 'thief' class. Voorhees (2009) analyses the *Final Fantasy* series' approach to class noting how classes contextualise significant information (stats, skills, abilities) with fictional roles and backstories. For instance, summoners are considered both a class and a fictional race in *Final Fantasy IV* (Square, 1991) (Voorhees, 2009). The thief is usually an agile but slightly weaker class which can literally steal and use items against their enemies while also fictionally having a background as a thief as with Rikku in *Final Fantasy X* (Square Product Development Division 1, 2001). Voorhees argues that classes are a less stable construct in later Final Fantasy games that allow any character to learn any set of skills via skill grids or job systems but character's initial starting stats still imply a class-based origin which can be reformed by the player if they wish. Classes and *Chess* pieces employ what Bogost (2006) terms 'unit operations' to help players understand their functions. Unit operations is a deliberately non-specific term that can be applied to any text, not just video games. To summarise, it can be thought of in the same way as an archetype in literature or a class in object-oriented programming. It is a generic signifier that is defined by a ruleset in order to express an idea e.g. villains in early motion pictures twirled their mustache and tied women to railroad tracks, thus these actions indicate villainy. Works, including games and simulations, are made up of one or many unit operations of which classes are a particularly successful example.

One modern example is useful to examine alongside the rook. *Team Fortress 2* is a class-based first-person shooter in which two teams of players compete to accomplish an objective such as stealing the opposing team's intel or capturing

points. The game features nine playable classes (Heavy, Pyro, Engineer, Scout, Medic, Sniper, Spy, Demoman and Soldier) each with their own statistics, abilities and unique weapons. By their names alone some classes give a very clear idea of what it is they do and others leave a bit more to the imagination.

Figure 3.1.5 - The Heavy as depicted in the '*Meet the Heavy*' promotional trailer for *Team Fortress 2.* by Valve (2009).

Consider the 'Heavy' class in *Team Fortress 2* (See Fig. 3.1.5). The Heavy has the most health of any class, the slowest movement speed and (by default) uses a minigun, shotgun and his fists. The Heavy is depicted in the game as a large heavyset man of Russian descent. Promotional material for the game depicts the Heavy as somewhat slow-witted and fetishistically obsessed with his minigun. The character relates in his own trailer *'Meet the Heavy'*: 'I am Heavy Weapons Guy. And this... is my weapon. She weighs 150 kilograms and fires $200 custom-tooled cartridges at 10,000 rounds per minute. It cost $400,000 to fire this weapon...for 12 seconds' (Valve, 2009). The Heavy's large size and stereotypically brutish demeanor along with his dull-witted nature and love of destruction build up both a fairly simple fictional character while also giving some indications of how the class is played. While Heavy players move incredibly slowly while firing the minigun they also have the benefit of having twice as much health as most other classes meaning skilled heavies can survive most one on one encounters even if the opposing player is technically 'smarter' than the heavy. As the Heavy himself reminds us: 'I have yet to meet one who can outsmart bullet' (Valve, 2009). While this extended fiction of

the Heavy is not necessary per se, it greatly informs and enriches the experience by offering us opportunities to imagine a fiction that colours the game's significant framework. Roles do this effectively because the player is making fictional statements with their significant actions and thus the line, fictionally, is blurred between the player and the heavy. Optimal strategies for play soon become a way of enacting this character.

It should be pointed out that the rook and the Heavy are not highlighted as examples of great fictions, merely functional ones. Functionality, not quality is the, primary goal of imaginability in this case. While roles like the Heavy and the rook are both good examples of imaginability in action, they differ in ways that are important to distinguish. The more fictionally complex a role becomes, the more significant functions must be incorporated by that role. Furthermore, the more fictionally complex a role becomes, the more difficult it is to connect those functions to the developing fiction. This is perhaps why dysnarrativa is not commonly reported when playing abstract or fictionally minimal games. The important takeaway here is that roles are not only good for imaginability but also for demonstrating the principle that fictions are more easily understood when they communicate a function and vice versa. This feedback loop of significant information informing fictional information not only serves imaginability but also strengthens the game as a whole. The rook is a siege engine which indicates its movement but also its late-game power,the ability to protect a king and so on. These imaginative connections are not necessary to play *Chess* but we understand the functions of pieces in *Chess* perhaps better because of them. This principle holds true for more complex fictions (such as *Team Fortress 2*) but it may become harder for the designer to make sure everything is connected in the same way due to the increase in information to be connected.

It is also apparent that fictional and significant information can outweigh one another proportionally so long as they do not contradict each other. Depending on the variant of *Chess* that is played there is almost no purely fictional information that makes up a rook. A rook has its fictional representation (the piece) that refers to a referent (chariot, castle, longboat etc) along with the rules that prescribe its abilities and legal moves. The rook's fictional information is greatly outweighed by its significant information (the rook's fictional status is generally not pinned down by players) but still helps understand the role as a whole. The heavy is more complex, fictionally speaking, as it possesses much more fictional information than its significant information. The heavy's nationality does not inform a player in a significant way (for instance, there is no game mechanic that expresses Russian

ethnicity and it would be risky business to attempt such a thing). It is purely fictional information that communicates a more fictionally complex idea. The heavy's fictional status covers all significant information relating to the heavy, and more! The heavy's ethnic origin does not inform any part of the its ludic role but it does not cause any dysnarrativa either.[23] Functional relationships like this are also important for how they tend to make contradictions obvious if they exist. If a functional relationship is challenged by a contradiction then that functional relationship usually no longer functions. For instance, if the Heavy were to move at high speed despite his bulky frame, there is no interpretation to account for this contradiction unless the fiction-function relationship is adjusted. Thus emphasising functional relationships has the happy side effect of making contradictions more likely to be caught and rooted out.

Functional fictions are not only communicated by character archetypes or roles as is the case with the rook and the Heavy. The dice, one of the oldest tools in games, have long represented the element of chance in many games both significantly, as a primitive number-generator, and fictionally, in games such as *Dungeons and Dragons* (Gygax & Arneson, 1974) where they are used to determine the success of certain actions. Dice constitute another naturally imaginable part of games but this role is not usually thought of as explicitly fictional as they usually determine the likelihood of fictional events rather than any explicit part of a fiction (such as a character). The role of the dice is chance itself. It is important to remember other examples of such 'dice roles' in games where significant information communicates something fictionally that is not associated with a character.[24] Fine describes how the significant information of dice rolls can take on fictional significance. Normally this significant information has an arbitrary connection to game events in games such as Backgammon:

> In board games, such as backgammon, dice determine the outcome of sequential action, but in fantasy games, unlike in backgammon, the dice generate actions that *could* occur in the real world. A roll of six in backgammon means that the player's piece gets to advance six spaces on

[23] Some might argue that Russian ethnicity may connote stereotypical associations such as strength, brusqueness and a tendency for heavy weaponry but the point is that the fictional and significant information do not contradict. The Heavy could be an amateur Badminton player for all we care. As long as there is no contradiction (for example the Heavy is not depicted as being weak or speedy as this would clash with the significant information of the role).

[24] Element types such as those found in popular collectable card games such as *The Pokémon Trading Card Game* (Media Factory, 1996) or *Magic: The Gathering* (Richard Garfield, 1993) are another example of abstract mechanics that tie to the fictional world of the game ('dice roles') as they detail weaknesses (fire is weak to water) or behaviours (white magic is to do with healing and protection while black magic concerns self-destruction for power).

> the board; that same six in fantasy gaming means that a player's character successfully bashes an opponent. (Fine, 1983, p.184)

Fine emphasises that a roll in one game has a material outcome (the backgammon piece is moved) while the other is partially imagined (a character bashes another character). Similarly, in the *Dungeons and Dragons Dungeon Master's Guide 5th edition*, Mearls & Crawford (2014) suggest several ways to integrate dice rolls into fantasy role-playing games. Their use can steer the nature of fiction towards or away from predictability or fairness depending on how they are incorporated into the game. As Mearls & Crawford state: 'Dice are neutral arbiters. They can determine the outcome of an action without assigning any motivation to the DM and without playing favorites. The extent to which you use them is entirely up to you' (Mearls & Crawford, 2014, pp.236-237). Dice, like the roles of the heavy or rook, are functional tools for the relaying of fictions in games and vice versa.

The functional relationship between fiction and function provided by roles has been noted by Brown when discussing a means of resolving the experiences dysnarrativa brings by unifying game elements through a state of mind he terms the 'game-playing-role':

> Instead of seeing compromises, we can see alliances between meaning, narrative and gameplay. Instead of feeling cornered by the different, grating elements of the experience, we can feel excited by the sparks these different mediums can generate beneath this new, overarching form and instead of traversing a wasteland, we suspend our disbelief and are left looking at a land of opportunity. This conclusion is restrictive, but also positive; it is saying that the game form makes its audience more likely to suspend their disbelief and take on a game-playing-role, since the alternative is privileging one side of the experience to an excess which will be made apparent through the form. (Brown, 2012, p.226)

Roles are identified as an ideal meeting place of significant and fictional information as they provide opportunities to imagine connections between the two, therefore roles provide imaginability. Brown (2012, p.232) suggests that roles help overcome dysnarrativa since it is a meeting point for significant and fictional information that is also directly enacted by the player. However, the discussion does not end at roles and they are only one aspect of imaginability. There are functional relationships elsewhere such as in a game's level design or 'roles' played by components such as dice.

Imaginability is functional which is one of its most useful attributes for game design. It helps communicate fictional information simultaneously alongside significant

information in a way that links the two into one. Significant information should always be both functionally and fictionally explained where possible as it is often the hardest to intuitively understand outside of an abstracted frame e.g. *Chess'* pretext of medieval warfare. *Team Fortress 2's* fictional universe is by no means realistic but it is less abstract than *Chess* and thus requires imaginability to account for more. It can't afford to have so much purely significant information since the game's less abstract fiction will betray it as abstract nonsense. In *Chess* the 8 by 8 grid the game is played on has a significant role but has no real fictional role apart from being a field of battle with even space for each player. It is entirely for the game's own sake whereas *Team Fortress 2's* play spaces must be for more than the game's own sake. They must be for the game *and* the fiction's own sake by clearly representing fictional locations. For the whole's own sake, fictions must tell [game] functions and functions must tell fictions.

Functional Fiction Principle Imaginability is functional. Imaginability's goal is not to improve the quality of fictional information. Rather, it allows functional principles of significant information to be intuitively understood via the game's fiction and vice versa. Roles are just one example of this working in practice. In short, the fiction tells functions and functions tell fiction. Emphasising a functional relationship between fictional and significant information also tends to reduce contradictions.Functional contradictions are very obvious

Proportionality Principle Fictional information and significant information can proportionally outweigh one another so long as they do not contradict.

Separated Games

As established in the first chapter, dysnarrativa is not always a problem. Gaps between significant and fictional information still have a use. In one of the earliest discussions of this phenomena Juul notes that 'Any incongruity between rules and fiction can also be productive. As in any aesthetic field, there is a chance that what is considered a problem can also be used as a positive ***effect.'*** [Juul's emphasis] (Juul, 2005, p.184). I would argue there is more than a chance that dysnarrativa can be a force for good. Although it seems flippant to suggest, one of the best ways to reduce dysnarrativa is to make a game that focuses on horror, satire or comedy. This could still be considered a solution, if not a compromise as it avoids the usually negative consequences of dysnarrativa and aids it in the same way that other

games aid imaginability. Here I would like to take some time to elaborate on work done in Chapter 1. In that chapter I noted that dysnarrativa can be purposefully employed to emphasise disruptive breaks in consistency which are commonly associated with certain genres - namely comedy and horror. This constitutes an alternative method of seeding imaginability into a game, albeit in a slightly metatextual fashion. In comedy and horror games the fictional information is such that it refers not only to the significant information of the game but also extratextual sources which establish conventions for both significant and fictional information commonly found in other games. Horror and comedy benefit from the audience's experience or knowledge of convention and so it is worth time analysing some examples to make clear that dysnarrativa is not always a bad thing. If integrated, separated and dissolved musicals are all viable then separation, not just integration or dissolution, may also be a viable avenue for games.

Drakengard (Cavia, 2003) is a dark fantasy action-role-playing-game. The game puts players in the role of Caim, a warrior engaged in war against an enemy empire. Early in the game Caim is mortally wounded by soldiers inside a castle where a dragon is similarly injured. In this fictional universe humans and magical creatures are able to make pacts with one another. Pacts usually involve the human sacrificing something permanently (such as the ability to grow hair, their sight or their fertility) so that the human and creature can become drastically more powerful and difficult to kill. If either one of the pact partners dies they both die. Caim and the dragon make a pact out of a mutual desire to survive (caim doing so for the purpose of revenge against the empire that murdered his parents). Upon making the pact Caim gains abilities that allow him to slaughter thousands of enemies with relative ease, something Caim is implied to enjoy immensely.

Drakengard's core concept was in response to the perception that mass-murder was disturbingly common in many popular video games (Bailey, 2014).The game's director, Yoko Taro, has expressed that he always considered the fact that killing hundreds of enemy soldiers is always celebrated in games but, when one thinks about it, is actually a sick thing to enjoy. *Drakengard* was partially a response to this common feature of games that causes players to feel some ambivalence towards the number of fictional people their character slaughters.

> It was about 10 years ago when we were working on the original Drakengard that I thought about the meaning of "killing". I was looking at a lot of games back then, and I saw these messages like "You've defeated 100 enemies!" or "Eradicated 100 enemy soldiers!" in an almost gloating

> manner. But when I thought about it in an extremely calm state of mind, it hit me that gloating about killing a hundred people is strange. I mean, you're a serial killer if you killed a hundred people. It just struck me as insane. That's why I decided to have the army of the protagonist in Drakengard be one where everyone's insane, to create this twisted organization where everyone's wrong and unjust. I wanted to weave a tale about these twisted people. [Yoko Taro in *Drakengard 3 - Philosophies of violence*] (Playstation, 2014)

Taro's sentiment is neatly reflected by its grim repetitive gameplay that somberly tallies kills at the end of every level. *Drakengard* is often interpreted as satire as Caim is given the ability, the motivation and the twisted psyche to enjoy and personally carry out mass murder. Companions met later in the game are similar perversions of common hero-archetypes, among them paedophiles, egotistical cowards and child-murderers. The player character shares the player's unquestioning bloodlust as they are both content to kill hundreds for the sake of progress, and repetition and death are very much a part of the world. However, *Drakengard* ultimately wields dysnarrativa rather than imaginability for its aesthetic goals and this seems only acceptable where a game is breaking rules established within a medium (something, as I have argued, comedy and horror naturally do).

The later developments of the game's plot involve increasingly bizarre events and requirements that can be read as being signals to the player to stop playing. The game features multiple endings that play in sequence depending on the progress the player has made. The first of which being a fairly cliche happy ending and then subsequently involving the deaths of major characters, the ending of the world and even the interdimensional travel of the characters to Earth where they are unceremoniously killed by the Japanese military. Repetition and death are brought to the forefront of the experience but not as a means of naturalising the fictional world but to show us how, structurally, game fictions can be horrific.

Techniques that purposefully disrupt fiction are not unheard of which is why dysnarrativa cannot be dismissed absolutely as a problem. Experimental and metafictional narratives have been hallmarks of innovation in theatre, film, literature and music and are often employed as means of self-reflexively critiquing these media. Why should games be any different? Perhaps the most infamous example of this is the playwright Bertolt Brecht's 'Verfremdungseffekte' or 'alienation effect' a method of calling the audience's attention to the satirical nature of the work.[25]

[25] Brecht gives his own definition of alienation: ' What is alienation? To alienate an incident or a character means to take from that incident or character what makes it obvious, familiar

Brecht's plays often sought to engage their audiences intellectually rather than appealing to emotional involvement which he saw as surface-level sensory pleasure (Brecht, 1964; Rorrison, 1983; Taylor 2012). Rorrison (1983) notes that some of Brecht's plays included scene summaries projected before a scene as a good example of the alienation effect. 'These titles are one of a number of anti-illusionistic devices which Brecht uses to keep the audience on their (metaphorical) toes. From being passive watchers they become intellectually active participants, and the theory is that by being told in advance *what* happens, they are freed to concentrate on *how* it happens' [Rorrison's emphasis] (Rorrison, 1983, p.xxxi). This effect was achieved with total disregard for presenting a believable fictional world. Even the acting itself could alienate the audience: 'If Brecht thought his actors were too involved in their parts he would sometimes require them to say, 'he said' or 'she said' before speaking their lines, to achieve the necessary detachment.' (Rorrison, 1983, p.xxxiii). Brecht's plays would have certainly had an impact on their audiences and their value is because of, not in spite of, this detachment.[26]

In this way dysnarrativa can be used to detach the player from what they are playing so that they look at things in a new, perhaps critical, light. It is not only employed for the sake of reflexive metafictional discussions though. It can also be used to simply unsettle the audience or make them laugh. *The Stanley Parable*, discussed at length in Chapter 1, often directly engages with dysnarrativa for the purposes of satirical comedy (although some scenes are so dark as to be horrific). If dysnarrativa is to be intentionally achieved for any of the above reasons then one need only look at the branches of dysnarrativa identified in Chapter 1: material problems, the structural nature of games and the division between player and designer. *Drakengard* employs intertextual knowledge of the structural nature of games (most prominently the unsettling repetition of murder to absurd degrees in most modern action games) to achieve its goals but this is only one option.

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or readily understandable, so as to create wonderment and curiosity' (Rorrison, 1983, p. xxxi).

[26] This technique is not always used to detach an audience and can actually strengthen immersion into a work. Taylor (2012, p.89) discusses at length how musicals intentionally create gaps and discontinuities to heighten the emotional content of scenes within them. Brecht believed musical performance to be inherently unreal and that the more unreal it was the greater the pleasure, what he terms a 'sordid intoxication' (Taylor, 2012, p.89). Brecht argues that musical theatre 'creates pleasure for the audience members, and consequently they become less awake and aware' which he derided for its lack of satire despite being fictionally inconsistent.

Game designer James Crawford (2014) has stated how glitches and other material problems (intentional or not) work well for horror. He gives an account of his own experience with a potential glitch in the game *Mole Monster* (Crawford, 2014):

> I played this game only once but I still remember one moment vividly. During a tense chase scene, right as the monster was about to maybe catch me, or maybe not, the game started to stutter. It jumped back several frames in the simulation prior and repeated them. The stutter threw an already tense situation into confusion and drew it out temporally building drama. Was the game glitching out or was that a feature? I may never find out, I haven't played that game in 10 years. But that moment has stuck in my head. (Crawford, 2014)

Crawford believes the key lies with a removal of the common expectations players bring to games. Subverting these will create a jarring experience but, Crawford argues, it will be a memorable and compelling experience. Crawford stops short of advising that game designers incorporate glitches into their designs but the effects of upsetting the consistency of a player's expectations can pay off:

> Glitches provide an enormous advantage in that when a player perceives a glitch all her genre savvy goes right out the window. Players know nowadays that you're always going to be fair, every path always leads to a reward and you won't put them in a fight if they don't have a weapon yet. But if glitches are involved all bets are off (Crawford, 2014).

Drakengard's score likewise comments on the decay of order throughout the game. The repetitive score samples various pieces of classical music but then loops and distorts them, signalling the uglier side of the game through material problems with the music. After several hours of playing the game the player will hear music distorted to such a degree that it actually sounds like there may be something wrong with the audio playback of the console itself. This may clue the player into the true intent of the developer and take them, however briefly, out of the experience. Something is wrong with the game hardware and, by implication, the world of *Drakengard*. I have described how abrupt shifts in game genre are another way that a game can be framed as satire or parody (Summerley, 2012). Jim Crawford's own *Frog Fractions* (Twinbeard Studios, 2012) and *Nier* (Cavia, 2010) (another Yoko Taro game) both intentionally employ dysnarrativa to successfully achieve their respective goals (Summerley, 2012). *Frog Fractions* relentlessly shifts between shoot-'em-up, text-based adventure and rhythm game, cluing the player into its subversive intent throughout (Crawford, 2014). *Nier* follows on from Yoko Taro's work on *Drakengard* and was meant as a development of the critique put forward in *Drakengard*. Citing his experience of a post-9/11 world Taro explains: 'The vibe I

was getting from society was: you don't have to be insane to kill someone. You just have to think you're right' (Playstation 2014).

Imaginability is often achieved by emphasising the overlap between significant and fictional information but comedy often has the opposite goal. Gruner (1997) defines a [verbal] joke as: 'the arbitrary union or combination of two ideas which contrast in some way'. This is the exact opposite of what I suggest imaginability do and would make for a decent definition of dysnarrativa. Joke set-ups must be contrasted by their punchlines and they are understood often because of the sharp and abrupt contrast that exists in jokes.

While *Drakengard* is a sort of satirical horror game, the technique of deliberately employing dysnarrativa can be used in certain types of comedy games as well. Fishburn (2012) details the intentional use of dysnarrativa to create offbeat humour in *WarioWare Inc., Mega Microgames$!* (Nintendo R&D1, 2003) (hereafter *WarioWare*). The game features Wario (the negative doppelganger of Mario) greedily peddling a series of 'microgames' which the player must help develop, usually by playing them. The microgames are not usually longer than 10 seconds and so the instruction for playing them is given by a single exclamation such as 'Avoid!'or 'Jump!'. Fishburn (2012) notes that across these games the context for these exclamations rapidly switches which causes confusion for the player: 'It's not only the rapid context-switching that causes confusion, but also that the game deliberately sows confusion with pre-game instructions' (Fishburn, 2012, p10). This helps create what Fishburn terms 'instructional dissonance' which not only provides humorous dysnarrativa for the player as the consistency of a word such as 'dodge' is unpredictable:

> The instruction, "Dodge!", implies action, but in at least one of the winning scenarios, inaction is required. Instead of always having the meaning, "get out of the way", "Dodge!" here can also mean, "don't put yourself in the way." This is an example of instructional dissonance that… creates a challenge by withholding information about the microgame's fiction and about its operator actions. (Fishburn, 2012, p.15)

Fishburn (2012, p.19) even argues that this dissonance extends into the the physical instruction manual packaged with the game which is generally unhelpful, inefficient and frequently deviates from discussing how to play the game: 'This misdirection is an intentional and consistent strategy to actually instruct as little as possible and instead to immerse the player in Wario's bizzare narrative and schemes' (Fishburn, 2012, p.23). Along with the contextual frame of irreverence provided by the cynically greedy fiction of *WarioWare* this instructional dissonance

wields dysnarrativa to create comedy through frustrating, inconsistent or bizarre gameplay. Where this dysnarrativa is normally unwelcome it becomes a core part of the experience when framed properly. In a talk on designing comedy games, game designer Zoe Quinn dissects comedy's mechanisms for the sake of implementing them in games: 'What comedy does is it surprises you. You expect one thing and then you get a totally different thing that's humorous and you get a laugh' (Quinn, 2015). The rapid context-switching in *WarioWare* that Fishburn notes is useful for establishing a precedent that can be subverted later for a comically dissonant effect, something Quinn suggests comedy game designers implement: 'We can create systems, scenarios, and levels that set expectations for the explicit purpose of subverting them later' (Quinn, 2015). This disregard for consistency is what dysnarrativa helps achieve and is a powerful tool for comedy as well as satire and horror.

Directly implementing dysnarrativa is not the only means of making a comedic game and Quinn is right to caution designers on the problems comedy games run into. The structural repetition that's inherent in games can thwart even disruptive forms like comedy and horror which Quinn identifies: 'The problem with systems, too, is that since they're so repetitive by nature, it can kind of get stale after a while' (Quinn, 2015). Pugh (2015) echoes this in a breakdown of the challenges inherent in writing *The Stanley Parable.* Quinn says shorter games tend to benefit from a lessening of the feeling of repetition and suggests making shorter games to more easily produce a comedy game. Variety is required to break the pattern recognition inherent in learning game systems and dysnarrativa is one of many ways to do this. Jim Crawford (2014) intended *Frog Fractions* to shatter expectations constantly before the player was able to start predicting the game's direction and *WarioWare*, similarly, makes many abrupt 'genre shifts' (Summerley, 2012) across a short space of time. Quinn says that timing is an important element of comedy which makes it tricky to mesh with games. Since time is a fixed constant and the player's behaviour is not this presents additional problems . She also mentions that world design is important and that it should reflect the intention of the developer which, I would argue, is the case with every case study of imaginability discussed in this chapter.

While separated games are an excellent and appropriate place for dysnarrativa it is worth remembering how a game is not always intended to be separated. It is telling that dysnarrativa in some games is reacted to with horror (glitches) or laughter (nonsensical or inconsistent juxtapositions such as the *Silent Hill* image) and is one of the main reasons why a game should be wary of what causes it. Quinn tells us

that ‘Comedy is about surprise and subversion of expectations’ (Quinn, 2015) but if these expectations are what you intend then this is most definitely unwanted. The similarities between the genres of horror and comedy should be clear. Quinn (2015) even mentions their connection through the requirement of surprise: ‘We can also sort of learn from other games that have done, like, long form surprise based things well. Horror is that genre.’ She argues that comedy and horror present the same game design problems and both require that the player is continuously and regularly surprised.

Robert Venturi (1966), in a discussion of contradiction in architectural forms, establishes two categories which are useful for the discussion of separated games. He categorises two relationships between contradiction and consistency. The first is what he terms ‘contradiction accommodated’ to refer to forms that integrate what is normally jarring and disruptive into the aesthetic of the whole piece. Although Venturi is discussing this in the context of architecture it is easy to see the parallel in games. *WarioWare, Frog Fractions, Drakengard* and *Nier* all incorporate some disruptive element that is permissible only because these works are about disruption. They grapple head-on with the concept of dysnarrativa rather than accidentally tripping over it. The second term Venturi uses is ‘the difficult whole’ in reference to forms that contain both consistency and contradiction and so the end result is a feeling of tension. This broadly applies to any game that suffers from more conventional, unintended dysnarrativa. The *Silent Hill* example could be classified as a difficult whole. Separated games are about separating difficult wholes from accommodated contradictions. This can be tricky without knowing the author’s full intent but usually horror, comedy and satirical games signal their intentions fairly clearly. Venturi sees contradiction as antithetical to order, but, not necessarily bad: ‘Contradictions can represent the exceptional inconsistency that modifies the otherwise consistent order, or they can represent inconsistencies throughout the order as a whole’ (Venturi, 1966, p.41). Separated games are similar. They revel in contradictions to challenge established conventions but their power does not seek to overthrow consistency, merely to contrast and critique normality with abnormality.

It may be that employing dysnarrativa purposefully for a certain effect works precisely because it is not really dysnarrativa. What I mean by this is that it constitutes a shift in focus for the audience. Games that intentionally attempt horror, comedy or satire usually signal this to the audience somehow. Instead of being prompted to imagine a fictional world the player is prompted to imagine the more metatextual elements of the game and/or games in general. In a sense imaginability

is achieved but in a separate sphere of enjoyment. This process just happens to involve purposefully evoking, what would normally be, dysnarrativa. Another argument raises its head here of whether unintended dysnarrativa gives unintentionally separated games a unique character not found elsewhere. There is great influence in dysnarrativa and some cases may help a game's infamy such as the infamously bad voice-acting in *Resident Evil* (Capcom, 1996) or heated discussions about whether or not Link has pink hair in *The Legend of Zelda: A Link to the Past* (Nintendo EAD, 1991). In some cases dysnarrativa must not be reduced. In these cases dysnarrativa presents chances for critical reflection of the form. As Venturi asks 'Should we not look for meaning in the complexities and contradictions of our times and acknowledge the limitations of systems?' (Venturi, 1966). Dysnarrativa is an opportunity, in some cases, to address this question directly.

Dysnarrativa is not a guaranteed result of a qualitatively bad fiction although it could be argued that it is a sign of one. Identifying the presence of dysnarrativa is not a slight at the quality of the work. It is a potential for design to be smoothed out and refined so that the overall play experience moves forward without interruption. Many great games exist, some of them considered classics, that feature glaring fictional inconsistencies which would seem to present a paradox. There are also consistent fictions which also happen to be of poor quality. If fictional consistency is not commensurate with a game's quality, what does it matter that it is corrected? Fictional consistency is not a sole indicator of a game's overall quality however they are occasionally related. The goal for consistent fictions isn't for them to improve a game fiction's quality (although it certainly helps) but for the game as a whole to be made more accessible, learnable and imaginable. Some (separated) games can function without consistent fictions. It should therefore be noted that I am not prescribing a magic cure-all that will save a game's quality, nor am I suggesting that every game would benefit from the techniques I have shortlisted in this thesis. This thesis is concerned wholly with reducing dysnarrativa in games. I believe the research findings are useful for creating imaginability and reducing dysnarrativa but if one wants to achieve another goal (for instance, create a separated game) then this should be done from an informed position. Ignoring the structural idiosyncracies of games risks stumbling upon dysnarrativa unintentionally. Identifying dysnarrativa is not just frivolous opinion that a game is bad. I argue that it poses a serious barrier to the understanding of a game (or any given work for that matter). If a game causes dysnarrativa and it can be fixed then why tolerate it? It is also important to

separate consistency from judgments of quality because it is much easier to measure how consistent a fiction is than to objectively appraise its quality.

Separated principle - To avoid the negative effects of dysnarrativa, frame a game around comedy, satire and/or horror, and/or emphasise dysnarrativa by employing the three branches of dysnarrativa. Paradoxically this will cause imaginability but on a metatextual level.

Chapter 3 Intermission

So far some principles of imaginability have been developed under the general heading of context. Before laying out a proper conclusion to this chapter, issues of representation must be considered for their impact on imaginability. The conclusion section of this chapter will come at the end of part 2 where all the principles will be gathered for refining and to point the way to further discussion of dysnarrativa.

Chapter 3: Bridging the Gap: The Quality of Being Imaginable

Part 2: Representational Balance

Games create abstract representations of precise units of human experience.

Ian Bogost (2006, p.114)

...there is a strong linkage between the believability of the characters and the dramatic potential of the work. This has been perhaps the most technically limiting factor to dramatic game design. In *The Sims* we fell back on abstraction to address this issue. By purposely making the Sims fairly low-detail and keeping a certain distance from them we forced the players to fill in the representational blanks with their imaginations

Game designer Will Wright (2004, p.13)

Introduction

Manipulating context to help imagine a consistent fiction was established in part 1 of this chapter. While the principles arrived at so far are useful it is also worth discussing the other major channel by which information in a game is communicated to a player: the representation. The means of representing fictional and significant information and the style that is chosen are important and have an effect on the degree to which a game is imaginable. Representations are those parts of the game that communicate information (fictional or otherwise) by prompting us to imagine them and can include: the game's user interface, text, character models, sound, level geometry, art style, colour and many other elements. In this second part of the chapter, issues of representational style and depiction are discussed in depth with regards to imaginability.

The Sweetspot - Comprehensiveness and Degrees of Imaginability

It is worth stating that imaginability is not an 'either-or' property; there are degrees of success when it comes to imaginability. To illustrate this point I'd like to turn to an example that can be found in many fighting games. Fighting games present slightly more complex fictional worlds than *Pong* or *ELIZA* do but are still relatively simple. They are framed well, usually as martial arts contests, to account for fights likely to be repeated over and over with characters employing the same moves hundreds of times. Like *Team Fortress 2*, playable characters in fighting games form archetypal, ludic roles. It is the way in which fictional characters in fighting games are represented that gives some clues as to how to achieve a high degree of imaginability. There are two components of fighting game character design which demonstrate imaginability - hitboxes and character sprites. Here we will cross-examine two fighting games which use these techniques to show how imaginability is not a binary state, there are degrees to which something can be imaginable.

In *Street Fighter 4* (Dimps and Capcom, 2008) (and almost all fighting games) characters are represented through a model or sprite that depicts the character's appearance and hitboxes (invisible during play) that track the character's attack's range, duration, special properties and also where the character is vulnerable at any given moment (in Figure 3.2.1 hitboxes can be seen overlaid on top of the character models). Hitboxes are a form of collision detection between character models so that connected hits can be tracked and damage allocated in many fighting games.

Collision detection is used in many games to prevent characters falling through the floor or to confirm actions (Ericson, 2005, p.1). Character models in *Street Fighter 4* have a relatively high polygon count and so doing real-time collision detection for these models would require intensive processing power since the position of collision data must be determined every frame with most games operating at between 30 and 60 frames per second (Ericson, 2005, p.2). The simplest means of confirming a collision between objects (even in 3D space) is usually to use two rectangular bounding boxes (hitboxes) as these only have two sets of coordinates each to compute (Sunday, 2012). Thus *Street Fighter 4's* characters are represented fictionally by a character model and possess corresponding significant information in the form of (normally invisible) rectangular hitboxes.

Characters in *Street Fighter 4* were intentionally designed with a rather bulky style with proportionally large hands and feet (Kamei, 2017). This artistic style helps the hitboxes (which are invisible during play) to be roughly guessed at based on the fictional depiction of the character's actions and appearance alone. In a talk by Toshiyuki Kamei, *Street Fighter 5's* (Dimps and Capcom, 2016) art director, he describes characters as being 'A symbol (indicator) which conveys information' (Kamei, 2017). Kamei reveals that an art document, used by Capcom for character design, specifies certain parts of anatomy (typically the limbs) that must be exaggerated to enhance how readable a character's actions are. This is done either by exaggerating proportions (making limbs bigger than they would be if they were anatomically correct) or by increasing the density of visual information in key areas (in *Street Fighter 5* this is done by applying a texture to characters skin which is usually bare near limbs and draws attention to where they are moving). Because hitboxes traditionally are rectangular (so that they can be tracked in real-time without requiring too much processing power - the simplest shape that serves this purpose is a rectangle) and have varying dimensions, the bulky, muscular character design of Street Fighter works well to communicate hitboxes without being too explicit. The correspondence between the mapping of hitboxes and the areas covered by a character's body are not always 'one to one' but generally the feel of the game allows for accurate intuition of the hidden hitboxes of each move. This can often result in player's feeling for a 'sweetspot' which can be remembered because of the imagined point of contact at a certain part of a character's limbs. Kamei notes that in an early iteration of *Street Fighter 5,* fighters with realistic proportions were harder to read (at the speeds required of a competitive fighting game (60 frames per second)) and that the quickest way to communicate this is through character design:

‘... the need to exaggerate and deform the models for the purposes of legibility during battle. Well, a very realistic rendering style just doesn’t match up with that so this helps keep the image consistent’ (Kamei, 2017). It is interesting to note that the art direction favours consistency of legible information as opposed to accuracy to reality. This is important going forward as we address the considerations for representational style.

At high levels of competition, the fiction of *Street Fighter 4* is arguably ignored so that a game involving accurate execution and knowledge of purely significant information may be played. The key here, I argue, is that imaginability is what helps us understand *Street Fighter 4* intuitively. For beginners it is invaluable as we mostly interpret the fictional information presented to us (while our knowledge of the significant information is lacking). One thing Kamei emphasises is that, for a beginner, it’s important that super moves be ‘easy for them [players] to imagine them [moves] with a simple phrase’ (Kamei, 2017). For example, it is easy to visualise a character doing a flying headbutt attack or spitting fire at their opponent. Without that general connection between a character’s visual depiction and their hitboxes we would not have a clear fictional referent to rely on for significant feedback.

Figure 3.2.1 - Partial list of Ryu’s Hitbox Information for *Super Street Fighter 4 Arcade Edition* (Dimps & Capcom, 2011). by Eventhubs (2011).

As can be seen in Figure 3.2.1, Ryu’s ‘normal attacks’ have fairly chunky hitboxes that often go a bit beyond his body. Red squares in the figure indicate a hitbox that

has active attack properties. Green squares indicates a ‘hurtbox’ which outline where the character is vulnerable to attack. If a hurtbox contacts a hitbox then the hit connects and damage will be dealt according to the stats of each attack. The hitboxes give an indication of Ryu’s actual range of attack but are just short or just over his fictionally depicted range. Ryu’s shoryuken/dragon punch hitboxes (See Fig. 3.2.2) have special properties that reflect the special nature of the technique. The move is commonly used to counter opponents jumping in with an aerial attack. The move is so useful the potential threat of a shoryuken attack often deters players from jumping at all. It has a very quick start-up but the punch doesn’t actually connect in the way players might realistically assume. The player’s imagination is key here, not the realism in the depiction of the punch. As you can see from the frames of the animation alongside the hitbox information, the fist itself barely has a hitbox during the move. The feel of the dragon punch is of an unbeatable counter to aerial attacks and thus its hitboxes represent this idea and it is backed up by the fictional depiction of a special move.

Figure 3.2.2 - Ryu’s ‘Shoryuken’ Hitbox Information from *Super Street Fighter 4 Arcade Edition*. by Eventhubs (2011).

In *Skullgirls* (Reverge Labs, 2012) characters tend to be fairly slender and this shows a contrast to the imaginability that *Street Fighter 4* presents. Character silhouettes are less ‘blocky’ and tend to have less box-like shapes in their design. Like *Street Fighter 4*, *Skullgirls* utilises rectangular hitboxes for collision detection but with a key difference. Hitboxes in *Skullgirls* follow the character outlines quite

closely and there are more of them used to describe the exact contours of characters (See Fig. 3.2.3). As a result they are slightly more precise in terms of collision detection yet harder to intuitively feel out and thus land successful hits. Counterintuitively, *Skullgirls'* hitboxes fitting the character more closely (as opposed to the character design compromising for the significant information) actually leads to some attacks missing when it 'feels' like they should hit due to how these narrower hitboxes constrict around character sprites. One might assume that hitboxes more closely bounding the area of the character would be more 'realistic' and thus more fictionally useful. The nature of hitboxes attached to a character model, in both cases, invites imaginability but the degree to which they conform to the character's fictional representation can lead to differing strengths of imaginability. *Skullgirls* does succeed at imaginability but not as well as *Street Fighter 4* does. It becomes clear that the design of *Street Fighter 4* privileges the resulting feeling of playing the game rather than attempting comprehensiveness for its own sake. This suggests that not only are there degrees to which a game can successfully achieve imaginability but also that comprehensiveness could potentially risk dysnarrativa as well. One cannot give too little or too much information; there is a 'sweetspot'.

Figure 3.2.3 - Hitboxes in *Skullgirls* closely follow the contours of character sprites. By Lab Zero Games & Reverge Labs (2012).

This principle, that a spectrum of imaginability exists, exacerbates the challenge of reducing dysnarrativa. The fact that *Skullgirls*, which by all accounts is the more

fictionally representative of significant information, is less successful at achieving imaginability seems to run counter to what we would naturally assume. It seems that some degree of abstraction always tends to help but it is not clear to what extent which is why, perhaps, dysnarrativa is as common as it is. It is clear that representation is a key part of imaginability for this reason but the question arises here 'how much imaginability is sufficient'?

In Festinger's research into cognitive dissonance he notes that dissonance can be experienced at different degrees of magnitude (1957, p.16). The magnitude depends on the importance of the cognitive elements that are in dissonance. Since importance is a subjective factor the upshot of this is that each person will have differing degrees of tolerance for the same dissonance based on their own subjective cognition (1957, p.17).[27] This is why many dissonances can be possible at any given point but only a few trouble us persistently. Festinger notes that 'some dissonance is the usual state of affairs'(1957, p.17) but the magnitude is what's relevant. If the dissonance (or dysnarrativa in our case) can vary in magnitude then it makes sense to conclude that imaginability operates in the same way. The model created in chapter 2 is somewhat abstract and only really serves to aid our imagination of the process by which dysnarrativa can be reduced (See Fig. 2.15). The model is fairly accurate for how specific cases of dysnarrativa or imaginability operate in a game but in reality games present a vast amount of information that must be sorted in the same way. Some of these minor exchanges of information may lead to minor (potentially ignorable) dysnarrativa, others may blend into imagined information and some create massive dysnarrativa that cannot be ignored.

Festinger notes that the magnitude of dissonance can be reduced in the same way that most dissonances are resolved, usually by changing information to provide consonance between otherwise dissonant elements (which is what is proposed in the imaginability model) (1957, pp.21-22). However, *Skullgirls* shows how information cannot just be continuously added. There is a sweetspot at which imaginability achieves peak efficiency. This is because trying to explain every minor inconsistency, while well-meaning, is actually almost as distracting as dysnarrativa and could even potentially cause it. *Street Fighter 4* hits this sweetspot while

[27] Festinger notes that this can even be a predictor for how likely a person's political inclination is to lean. Left-leaning people tend to be more susceptible to dissonance and consider areas grey or undecidable whereas right-leaning people tend to have more absolute convictions and believe in firm guiding principles even in the face of dissonance.

Skullgirls overshoots it just a bit by overcompensating with relatively more comprehensive hitbox data.

So why is comprehensiveness unhelpful? At one point during this research it seemed self-evident that the gaps in information that exist in most games could be closed by simply increasing the amount of fictional information within them i.e. where something didn't make sense, an additional statement would clarify something that was ambiguous or not stated. When looking at games that contained large amounts of fictional information or featured extended fictional universes, such as RPGs like *Mass Effect 3* (Bioware, 2012), *Fallout 3* (Bethesda Game Studios, 2007) or fictional worlds such as *Star Trek*, it became clear that this actually tends to make dysnarrativa more likely than not. This counterintuitive dead-end is something I term the 'Star Trek Comprehension Principle'. It is so named because of how *Star Trek* (and other long-running multimedia fictions) have been noted as suffering countless fictional inconsistencies when read as a whole. This principle builds on Jenkins' (2008) examination of the behaviour of fandoms. In particular Jenkins singles out Star Trek fans as being a good example of fans resisting 'dominant taste':

> ...the fans' resistance to the cultural hierarchy goes beyond simply the inappropriateness of their textual selections and often cuts to the very logic by which fans make sense of cultural experiences… From the perspective of dominant taste, fans appear to be frighteningly out of control, undisciplined and unrepentant rogue readers. (Jenkins, 2008, p.432)

Jenkins goes on to discuss how fans 'poach' texts, taking only what they value which is usually obsessive cult-like reverence for a text such as the canon fictional universe of *Star Trek*. To read the entire extended fictional universe of *Star Trek* (that is all the episodes, films, books, comics and other media) as one comprehensive, canonically accurate whole is practically impossible without encountering some kind of dysnarrativa. There are simply too many authors and too many chances for contradictions. For every new fictional statement made, by one of *Star Trek's* many writers, the risk of a new contradiction, discontinuity or inconsistency grows. This is until, finally, the only recourse is to resign oneself to the fact that *Star Trek* is 'just a show', some *Star Trek* fictions 'don't count' or that there are multiple universes or some other unsatisfying explanation that devalues the significance of that work when taken as a whole. The focus shifts from the enjoyment of a fiction to a focus on an encyclopedic catalogue of fictional inconsistencies. This could even be between information that is intended to be of minor relevance. In some cases *Star Trek* itself makes fun of these inconsistencies.

In one episode of Deep Space Nine, *Trials and Tribble-ations* (Jonathan West, 1996), the change in appearance of Klingons between *Star Trek: The Original Series* and *The Next Generation* is humorously dismissed by a Klingon character as being caused by an event that Klingons refuse to discuss with outsiders. The real reason for the change is the creative difference in approach to Klingon make-up design between the two series.

The goal of fiction, I propose, is not to present a fictional world in its most minute detail. Rather it is to stimulate the imagination. Comprehensiveness avoids this goal and actually counters the ability of the imagination to supplement interesting fictions. It also makes the job of the one communicating a fictional world much harder (representing a completely realistic world is more difficult than a less realistic one). This runs counter to the idea of a game's rule set. Comprehensive rulesets are actually a benefit in games and so designers may think that the same is true for fictions but I hope I have shown that it is not. The key lesson here is that imaginability is achievable in degrees and some degrees of imaginability are more preferable than others but not in the way one might initially assume. Without simply saying it depends on a case-by-case basis, there is a good argument that comprehensiveness should not be a goal and does not make a game's fiction necessarily more imaginable. If representational comprehensiveness is unhelpful it might be tempting to pre-emptively conclude certain things but it has been made clear that the topic of representation needs further exploration.

Spectrum of Imaginability Principle - There is a spectrum of imaginability. In other words imaginability can be achieved but to differing degrees of success.

The 'Star Trek' Comprehensiveness Principle - Increasing the amount of fictional information in a game as a way to comprehensively explain every part of the fictional universe eventually increases the likelihood of dysnarrativa.

Sweetspot Principle - The Spectrum of Imaginability Principle and the Star Trek Comprehensiveness principle indicate that imaginability is not meant (or able to be) completely comprehensive. It has already been established that a low degree of imaginability means that dysnarrativa is likely. High degrees of imaginability are not useful but neither is a lack of imaginability. Thus a 'sweetspot of imaginability' exists where a game is neither too representationally comprehensive nor too representationally vague.

Representation

The notion of an ideal representational balance suggested by the sweetspot principle prompts me to discuss the impact of representation on imaginability and fictional consistency. Abstraction and realism exist on opposite ends of the representational spectrum. James Elkins (2008, p.57) points out the common need for representation in science and the arts but with different sets of values for the qualities of representation. Artists fear clear, literal representation just as scientists fear uncertain ambiguity. Simulations, as a tool, must be as 'realistic' as possible whereas artists tend to delight in subjective aesthetic pleasures and obfuscating meaning. Games, a combination of simulation and fiction, occupy an unenviable middle ground between the two. As technological artefacts and simulations, some would say that games would do well as paragons of scientific attempts to model the real world. As fictional worlds and spaces for play, others might argue that games must remain ambiguous, aesthetic exercises. It is worth bearing in mind the polymorphic functions and requirements of games and simulations. By their nature, games mix abstract objective rule-based systems with more comprehensive fictional worlds. The difference in the quality of significant information and fictional information necessitates some compromise between the two so that they are, representationally speaking, in balance. Therefore imaginability requires some level of representational balance if it is to remain within a 'sweetspot'. The reasons for desiring certain representational styles are wrapped up in technological, economic, commercial and aesthetic concerns and it can be difficult to untangle exactly what, in this arena, is helpful for reducing fictional inconsistency in a game. It is unclear what the parameters of this representational balance are and so the extremes of the representational spectrum must be examined with respect to games. This is so that we can determine what representational concerns are important to creating imaginability.

Representational Realism

I believed at an early stage in this research that a lack of realism was a major cause of dysnarrativa. 'Realism' is specifically singled out as a lynchpin of consistency and if a fiction is shown to be 'unrealistic' or 'illogical' then it is thought to be inconsistent (Makedonski, 2012). As a result, realism is often privileged by modern game publishers and marketers especially with regards to graphical fidelity and accuracy to historical or mechanical facts (accurate depictions of battles or guns) (Atkins,

2003, p.79). Realism is often loosely defined when employed in the criticism of fictions but it is understandable why it is colloquially employed to guide the creation and assessment of fictional worlds. These arguments are often related to representational concerns where a game has a realistic representational style which naturally butts heads with the more abstract nature of games. Perceived realism is thought to be informed by a number of factors including factuality, authenticity, social realism, character involvement, perceptual pervasiveness, and simulational realism (Ribbens & Malliet, 2010). Much of the discussion of realism relates to representation and given that representation is an important vector for information in a game it is worth exploring the issue of privileging representational realism further. For the sake of discussion I define representational realism as a style that privileges the real world as a referent when depicting a fictional world through accurate audiovisual fidelity (as close to the real world as possible) and/or accurate simulation of real world systems.

Walton (1990) discusses certain principles that can be applied to the study of fiction to account for certain peculiarities found within them. One such case is the supplementation rule which Walton states is: 'the body of propositions fictional...is to be filled out in certain natural or obvious ways, preserving the coherence of the whole' (1990, p.46). Further refined: 'the supplementation rule is supposed to preserve the coherence of the body of fictional truths, the fictional world' (Walton, 1990, p.48). In practice it is a principle which does not require the author of a fictional world to constantly clarify things about that world which the audience can safely assume are the case. It is similar to the *Star Trek* Comprehensiveness principle in that total comprehensiveness is actually a detriment to consistent fictions. One does not need to suggest fictionally, for instance, that characters have blood flowing through their veins or that they breathe air or that London is the capital of the United Kingdom. Such minor details are assumed by the reader and it would be distracting to bring them up In cases where the fiction differs from the real world we might invoke what Walton terms the 'reality principle' which states that what is true in the real world is generally true in fiction unless explicitly indicated otherwise (e.g. gravity is a force that exists in *Pride and Prejudice* much like in the real world yet in *Star Trek* the existence of faster-than-light travel must be explained as it does not exist in our world). The 'mutual belief' principle extends this (Walton, 1990, p.144). Reality is what the audience mutually believes to be true of reality e.g. God exists in the bible as he does in the real world (If that is what you believe). These rules help guide discussion on how an audience interpret and infer incomplete

information in a representational work. The supplementation rule assumes that certain interpretations are natural or obvious and appears to prescribe what would be worth bringing up from the narrator's point of view. Attempts at representational realism in games may serve to prevent imaginative connections being made since they may contradict with what the player expects of reality (whether or not this is true of reality). Walton states that what is thought of as 'realism' is no more than one of many depictive styles often confused for being realistically accurate (Walton, 1990, p.299). Depictive realism is just a convention of accurate resemblance. True realism is difficult, if not outright impossible, to achieve and to do so would actually risk dysnarrativa under the comprehensiveness principle since it would require total comprehensiveness. Doing so also invites closer comparison of the game to reality which will inevitably reveal differences between the real world and the game's model of it due to the inherently abstract nature of games.

Realism is not appropriate to bring up in every case of fictional consistency. Fictions can be unrealistic (in the sense that they do not stand up to scrutiny in comparison to the real world) but also be logically consistent. For example, *Chess* is not a very realistic depiction of medieval warfare but it does have its own internal logical consistency (Atkins, 2003, p.99). There are also cases where a fictional world can be factually realistic but not be read as consistent with what one expects (rather than knows) about the real world. The example of *Skullgirls* serves to show that a more comprehensively depictive game is not necessarily more imaginable. This is similar to the phenomenon whereby audiences expect the sound of horse's footsteps in fiction to sound like coconut shells banging together regardless of the sound horse's hooves really make on different surfaces. By 'realistic' we do not really mean realism but something akin to Walton's supplementation rule. Where something differs from our understanding of the real world, a fictional work must account for how it operates in some way.

What players often term or perceive as realistic, Fine suggests, is usually an established expectation of realism. In a 'realistic' depiction of the Middle Ages the introduction of flintlock rifles into one role-playing game is cited as a step too far by one player (Fine, 1983, p.82). In Chapter 1 it was discussed how *The Stanley Parable* comments on realism being an invalid measure for satisfactory consistency. This is the case when the narrator appeals to realism to dismiss the idea of the main character dying in their own story (a common occurrence in games). The term realism is used colloquially to refer to a common *expectation* that isn't necessarily grounded in logical arguments or an in-depth comparison to the real world. This

sentiment is reflected in Fine's (1983) accounts of players that vary in how they value realism in a game. Some players describe the notion of realism in fantasy games as 'ludicrous':

> Here are people who are doing things in a typical dungeon… that a marathon runner wouldn't be able to do. Run up five hundred steps carrying eighty pounds of armor after fighting for three hours… just the physical strain on the body, even for a really superior individual who was familiar with hard conditions and early training… there's no magic; one of these spells or any of this magic is all garbage and baloney. [Player account from Fine's interview] (Fine, 1983, p.81)

Yet there are others that revel in using authentic hieroglyphs to order their Egyptian armies into battle (Fine, 1983, p.81). There are also those players that enjoy historical accuracy if only for the chance to meddle or see how it might play out some other way in a fictionally consistent but historically inaccurate game. Atkins (2003, p.94) points out several cases of this with historical real-time strategy game *Close Combat* (Atomic Games, 1996). Despite its emphasis on historical accuracy, Atkins describes *Close Combat* as 'clean' in its 'removal of human suffering, tragedy, and distress … from its representational frame' (Atkins, 2003, p.90) and, like *Chess*, 'is similarly an abstraction of the experience of war' (Atkins, 2003, p.99). Realism is only useful so far as a player's expectations of a fictional universe assign realism value within the frame it presents. The representation of a game must privilege imaginability for consistency's sake. An extract from a player interview by Dormans shows the relation of framing to subjective judgments about representational realism and fictional consistency in a game:

> "I want to have a clear idea of what would be feasible in a certain game," reports one player. He points to a four-storey building opposite the street and continues: "climbing that building is easy in Dungeons & Dragons, hard in Shadowrun and when playing MERP I probably fall to my death. It does matter a lot which one it is, as long as it is clear to the player beforehand. [Player account from Dormans' interview] (Dormans, 2006)

As long as a player is cued to understand what to expect of a fiction through framing then the representational realism of a game can reasonably vary. Representational realism, therefore, is based on expectations players have about the game rather than reality. As Atkins puts it 'we do not expect or demand something indistinguishable from the real' (Atkins, 2003, p.139). Representational realism is not so much the issue as player expectation is. Naturally intuitive causal consistency is the focus of these expectations.

Atkins (2003, pp.27-28) argues that we never mistake attempts at depicting the real world for the genuine article because realism is just a style. I argue that this style is informed by expectations. The lack of realism as a criticism may be seen as one of Walton's silly questions (1990, p.176) and as Atkins points out it rarely interferes with the reading of other texts:

> 'No critic of the novel or of film would be particularly exercised by the distance that always remains between representation and real, and the essential 'illusionism' of what is commonly termed realism…. What is meant by realism here, then, places the emphasis on the 'ism' as much as on the 'real', and is intended to suggest that the 'world' offered by the game is itself internally consistent, realistic in its own terms and according to its conventions.' (Atkins, 2003, p.29)

Atkins (2003, p.139) uses the example of simulators to differentiate those games that emphasise realism as a matter of entertainment from simulational tools that attempt to be indistinguishable from reality for more instrumental purposes. In these two cases the expectation of representations to be employed is completely different. The expectation of realism leading to dissonance is also remarked upon by Smock as he notes: 'Incongruity by definition, indicates a stimulus configuration composed of elements that conflict with the "expectancies" of the individual in the sense he seldom, if ever, is presented with such a stimulus configuration in a "real-life" situation' (1955, p.354 in Festinger, 1957, p.39). This expectancy that clashes with a sense of realism is indicative of the fact that a lack of realism is not the problem that leads to dysnarrativa. What matters is player expectation which can vary between players. The solution to this subjective expectation can be helped by the framing principles which I outlined in the first part of this chapter.

Thus realism is only invoked in cases where subjective expectations are not adequately met. These expectations are subjectively constructed and depend on a number of factors. Critics of fiction are not the only ones who discuss notions of realism. Realism and logic are emphasised by Wyatt (2008, p.23) for the construction of a fictional world in *Dungeons and Dragons* (Gygax & Arneson, 1974) but they are always related back to an idea of consistency. In an earlier edition of *Dungeons and Dragons* Gygax suggests: 'It is important to keep in mind that, after all is said and done, Advanced Dungeons & Dragons is a game. Because it is a game, certain things which seem "unrealistic" or simply unnecessary are integral to the system' (Gygax, 1978 in Dormans 2006). While Gygax downplays the idea of a game being taken seriously the argument does reflect the effect of the abstract nature of games on consistency. These examples also reflect Kamei's (2017) notes

that privilege consistency over realism in the depiction of characters in *Street Fighter 4*. Consistency is not the same as realism or logic, these are only suggested tools to help maintain consistency. What really matters is that the players can reliably interact and imagine what is and might be in a fictional world while also understanding the game.

Representational realism is not always a useful benchmark for consistency and in some cases can make dysnarrativa more likely by being too representationally comprehensive. Realism is not inherently bad but it is not reliable as a countermeasure to dysnarrativa to make a game 'more realistic' and more fictionally consistent. Direct comparisons with reality (invited by the game) may even draw attention to the way in which it differs to reality and cause dysnarrativa as is the case with *September 12th* (Bogost, 2006) or *Close Combat* (Atkins, 2003, p.4). A player's subjective expectation informs values that assess consistency. As we saw in the example of *Street Fighter 4* and *Skullgirls*, hitboxes that have a near-one-to-one ratio to the fictional representation of their character counterintuitively felt odd despite this being a more comprehensively realistic representation of how one would expect character's limbs to collide. A realistic representational style was found to be difficult to mesh well with the significant information in *Street Fighter 5* for similar reasons (Kamei, 2017). Not only this but there are many different notions of realism implied by representational realism. Atkins (2003, p.150) notes that the games he discusses demonstrate the pluriformity of games and their different approaches to realism, some are simulational, some aspire to be representationally realistic and others attempt historical authenticity. All of them are very different representations and genres and show that there is no one goal of 'realism' and its invocation is more often unhelpful than helpful when determining how to reduce dysnarrativa. Having discussed representational realism it is now worth moving to the other end of the representational spectrum (abstraction) to see if this can help locate the ideal sweetspot on the spectrum of imaginability.

Expectation Principle - Players have subjective expectations of representational realism that are not necessarily based on accuracy to reality. These expectations can be adjusted by framing.

Ludic and Representational Abstraction

Since the inherently abstract nature of a game has implications for other principles of imaginability it may be worth examining abstract games from a representational perspective. Ian Bogost has said that 'games create *abstract representations* of precise units of human experience' [my emphasis] (2006, p.114) which is something I would like to untangle here. The use of the word 'abstract' in Bogost's words and what I term an 'abstract game' has to do with both its visual realism and its abstraction of meaning and so two definitions of abstraction reveal themselves. Ludic abstraction refers to the inherent nature of games which tend to abstract complex concepts. Games, like simulations, are imperfect models of the real world and so they omit certain details about the world. Ludic abstraction 'represents' ideas but in a highly abstract way. Bogost's (2006) unit operations can be thought of as a distillation of the idea of abstract systems that conceptually abstract some real-world analogue. Ludic abstraction is not a creative choice but is an inherent state for significant information in a game. Representational abstraction is an intended means of simplifying the information communicated by representations. This typically leads to representations that are visually unrepresentative of a specific referent and lack meaning beyond fundamental properties such as shape, colour or composition.

I suggest *Tetris* (Alexey Pajitnov, 1984) as a prime example of an abstract game and it features both ludic and representational abstraction (*Twister* and *Go* are other examples). Abstract games, in which meaning in the game is constructed primarily by significant information in the game and has no bearing on anything outside of the game, do not typically spring to mind when discussing fiction. Traditionally these abstract games focus on significant information to the apparent exclusion of fictional information.[28] The way fiction functions (or doesn't function) in abstract games is potentially useful for us to examine so that we might have a more complete perspective on reducing fictional inconsistency in games. Abstract games would

[28] Early board and dice games were not so much concerned with the fictions the players experienced as they were with engaging directly with chance and odds (Perham, 1998, p.101). Early board games that precede widespread territorial dispute amongst cultures would feature running as a goal which can be seen in many race games (Perham, 1998, p.112). They do not project what we would traditionally think of as a fictional world. Later examples such as *Chess/Shatranj*, *Shogi* (c.700AD) or *Go* (c.617-908AD) have more explicit links between what playing pieces represent or how they move but even these games are not enjoyed as fictions so much as they are as an exercise of strategy with the increasing importance of strategic warfare as a discipline (Perham, 1998, p.130, 160). Not much later, games played with dominoes (c.1120AD) or playing cards (c. 9-10th C.) do not feature obvious fictions and still focus on the manipulation of numerical relations and chance (Perham, 1998, p.11, 179).

seem to serve as evidence that a game need not worry about fiction in order to function. They are apparently played for the *game's* own sake. There are a couple of possibilities that this supposition presents. Either abstract games feature an atypical fictional world (there are no characters or plots but there are objects that are fictional), or abstract games are examples of non-fiction, i.e. what happens in an abstract game is simply what is actually, materially happening and does not constitute the representation of a fictional world nor anything of significance in the real world, only in the context of a game.

In abstract games such as *Tetris* we could imagine that its depictive style actually depicts a fictional world that is inherently abstract. In *Tetris* blocks fall from the top of the screen into a well and the player must organise them into rows so that the well can be cleared. The blocks fall downwards as we might imagine a physical object would under the pull of the Earth's gravity however they statically land and attach to one another apparently transferring no force to the blocks below and balancing perfectly in a grid formation. Furthermore when a line is completed the lined-up blocks vanish by unknown means and any blocks above them fall perfectly onto the blocks below. The blocks fall at an increasing speed the longer the game is played however it is not known (in the fictional world of *Tetris*) what force causes this. *Tetris* is not just depicting geometrical shapes or chaotic organisations of line but is in fact a window into a world where this is the case, however unreal or difficult this might be to intuitively imagine. There is no real point in concerning oneself with these systems *as* fictions, but I believe it may be more useful (for the purposes of discussing how games function) to make-believe that they depict a fictional, albeit abstract, world.[29]

If abstract games are examples of non-fiction, it could be argued that because only significant information exists in abstract games that no imaginative connection can be made as there is nothing to connect significant information to. Therefore the

[29] Tetris' fiction was the subject of disagreement between scholars as to whether games can or should be read from a systemic or narratological standpoint. Janet Murray suggested a metaphorical reading of *Tetris* as "a perfect enactment of the overtasked lives of Americans in the 1990s" (Murray 1997, p.143). While Eskelinen (2001) examined the game primarily for how its systems are temporally related to the player. In response to this disagreement Bogost has said: 'If Murray's interpretation is 'horrid' because it is determined to find a story at any cost, perhaps Eskelinen's is horrid because it is determined to conceal worldly reference at any cost. In both interpretations something is missing' (Bogost, 2006, p.100). I believe the difficulty in reading abstract games may stem from applying only specific methodological extremes to games as Bogost states but there is another issue. When looking at game fictions broadly it is easy to dismiss abstract games as just an outlier or anomaly when really they might operate by the same fictional principles even if their fictions are lacking in meaning or representational complexity.

game cannot suffer from dysnarrativa as their exists no gaps between (absent) fictional information and significant information and so there is very little that requires imagining. The game does not have any features traditionally associated with fiction (characters, plot, dialogue) and there is no reason to suppose that *Tetris* portrays any more of a fictional world than a brick does. Alternatively, Walton's argument is that, while representationally abstract, an abstract game still presents a very minimal fictional world. Again, dysnarrativa is eliminated because there is no way the fiction can be meaningfully troubling enough to cause dysnarrativa. Even if *Tetris* possesses a fictional world are we really troubled by anything in it? Abstract worlds are so different from our own that it doesn't make sense to scrutinise inconsistencies since the point of reference (our own world) is radically different to them. Abstract worlds simply do not carry enough meaning for us to be meaningfully troubled by dysnarrativa.

Arguing whether *Tetris* constitutes a fictional world is quite ancillary to helping reduce dysnarrativa and the discussion does not end there. Imaginative connections are possible in abstract games because there is so little fictional information and most of that is highly in-keeping with the rules of the game, thus imaginability is quite easy to achieve. As an example, playground games and freeform play may have basic fictional elements such as imagining the 'floor is lava' in *Hot Lava* or some other stipulation that prompts imagining something that helps others pick up the rules of a game quickly. *Stuck in the Mud's* helpful title allows the effortless communication of the game's rules to take root much like a player does when touched and subsequently 'stuck'. Yet this interaction does not require the imagination of a fiction that involves the sudden apparition of mud under one's feet, only an abstract analogy between the idea of mud and the rule of being stuck. Huizinga (1949, p.57) suggests many instances of play are enactments of superstition and ritual such as only stepping on an 'even number of steps' or 'avoiding the cracks' lest one suffer bad luck. Imagination certainly seems to be helped along by representationally minimal fictions like those of *Hot Lava* and *Stuck in the Mud*. There are also playground games of this nature that are totally abstract such as *Apodidraskinda* (c. 2nd Century AD) (Perham, 1998, p.203), commonly known as *Hide and Seek*, in which hiders and seekers chase one another in exercises of purely significant information. The representational abstraction of *hide and seek* does not preclude fiction but fiction is is not necessary either.

Indeed, abstract games follow the functional fiction principle outlined in the first part of this chapter. The functional fiction principle would suggest that fictional

consistency is not the only benefit from following the guidelines of imaginability. In some cases the presence of a fiction may benefit an abstract game's design by providing a greater degree of accessibility and intuitive learning. If we read an instruction manual from Ikea, there are symbols, icons and representationally abstract depictions of real-world analogues that aid in the construction of a given piece of furniture (See Fig. 2.3.4). The manual that we use to help us is fictional insofar as it depicts things in a way that causes us to imagine them. It draws from prior understanding about certain elements (the parts and principles of construction) so that we might imagine the outcome (the completion of each step and, ultimately, furniture). The process of constructing furniture is arguably abstract in an analogous manner to abstract games as it only holds meaningful significance within the limited frame of construction. The fiction contained within the instruction manual happens to be fairly useful as a guide for constructing the table itself. Indeed it is useful because of the fiction. The key principle is that this fiction allows us to imagine how something might realistically function where otherwise purely abstract information on furniture construction might make it difficult for unskilled builders.

Figure 3.2.4 - Extract from 'AGNE Stool' assembly instructions using abstract iconography to inform the user about customer support and safe assembly. by Inter IKEA Systems B.V. (2008).

Going back to the example of *Tetris,* we can see that the functional fiction principle and the framing principle are still helpful for abstract games despite their minimal fictions. Similar to the instruction manual, our understanding of the Tetrominoes in

Tetris is built on our understanding of construction but in a highly abstract way. We know that rectangular blocks of regular dimensions will fit together neatly and assume that they are falling as they move from the top of the screen downwards (upwards-falling blocks might cause a minor dysnarrativa unless they are shown in some way to be floating or propelled upwards in some fashion as is the case in abstract games like *Puzzle Bobble* (Taito Corporation, 1994) where 'bubbles' are shot towards the 'ceiling'). In *Tetris*, when a line is completed we could interpret this as an abstract way of representing 'work done' and it is satisfying and, more importantly, helpful to imagine this as being the case as we no longer need to pay that line attention. Instead we can focus our attention on the future creation of lines. As I noted in the earlier discussion of *Pong*, a player may have a harder time understanding *Pong* as a purely abstract game without the frame of a fictional game of table-tennis. *Pong's* famously minimal ruleset 'avoid missing ball for high score' (Kent, 2001, p.42) is predominantly a statement of significant information but the word 'ball' pushes the imagination further to fully flesh out an immediate understanding of the game's fiction and thus, functionally, how to play. If one is to take imaginability to a somewhat extreme degree, we can think of the functional relationships of Tetrominoes as drawing from imagined relationships between grid-based objects and abstract concepts like 'gravity' or 'work done'. In a sense any type of representation is, as Walton hypothesises, a kind of fiction even if it does not measure up to what is typically imagined as a fictional world. This is a radically broad notion of fiction but I believe it indicates how imaginability applies to all games, even those that seemingly possess 'no fiction'. Abstract games therefore reinforce the functional fiction principle since the ludically abstract functions found in games are easily modelled by representationally abstract fictions. They also reinforce the framing principle since the representational frame of a game's fiction can cause dysnarrativa if it is not appropriate for the significant information of that game.

So far I have argued that abstract games such as *Tetris* do not suffer many of the problems we typically associate with dysnarrativa. However, the sweetspot principle established earlier would seem to indicate that abstract games should be too vague to avoid dysnarrativa and so would run into frustrating omissions that would cause dysnarrativa. In practice almost no-one would encounter dysnarrativa while playing *Tetris* because its fictional and significant information are consonant. The representational abstraction of *Tetris'* fiction neatly matches the ludic abstraction inherent to its significant information and so imaginability is easily achieved. This

reframes the notion of there being a ‘sweetspot’ and the representational style of a game can actually shift the goalposts of what players expect for consistency. This suggests that a game’s representation may need to account for the representation of fictional information *relative* to the ludic abstraction of significant information.

This is not to suggest that it is appropriate to add more fictional information to every abstract game for the sake of it but that *the representation of a game’s fiction must be relative to the complexity of that game’s significant information*. I define complexity as systemic meaning that is constructed from layered, interdependent contexts requiring specialist knowledge to understand and often resulting in emergent outcomes. This consideration of relative complexity is so that subjective player expectations of consistency are framed appropriately. Game designer Raph Koster (2004, pp.168-169) puts forth an example where one imagines *Tetris* and the feeling that game gives the player. However, Koster suggests that if you were to change the playing pieces so that, functionally, they operate the same way as they do in *Tetris* but, fictionally, depict the pieces as people to be organised for execution in a concentration camp, this would radically change the playing experience. Koster is arguing that changing the game’s fiction will inevitably change the whole and in this case the fictional frame has changed. It will definitely give the game a different feeling as many would find the concentration camp frame distasteful but it may also make understanding of the game more difficult than it needs to be as the relatively simple mechanics may be too restrictively abstract for the fiction it presents. For the concentration camp frame to be consistent the significant information of the game would need to change so that there is a logical way in which one can imagine functions of the game reflecting the fiction it depicts. *Tetris* is too simple to accommodate this fiction and so the fictional representation must be adjusted relative to the complexity of the game’s significant information. This shows that framing must not only establish a sensible context for the game but that it must match the complexity of the significant information with the appropriate complexity of fictional information.

Figure 3.2.5 - Koster's example of *Tetris* re-imagined as a repugnant game in which the player organises bodies into a gas chamber. by Koster (2004, p.169)

One could argue that adding even a slightly more comprehensive fiction, of certain detail, to an abstract game would not aid intuitive understanding of the rules to any significant degree. It's possible that it may even cause dysnarrativa by violating the *Star Trek* comprehensiveness principle and the sweetspot principle as does happen with Koster's concentration camp example where the fiction becomes distracting because of its semantic baggage.[30] In cases of abstract games such as *Tetris, Twister* or *Go*, a less abstract fiction would not add much more clarity. This suggests that degrees of complexity in a game's representation matter with regards to fictional consistency given the inherent ludic abstraction of games. Koster's case is, relatively speaking, too comprehensive for such an abstract game. Fiction is helpful for abstract games but only so far as it aids understanding of significant information. *Pong* is an excellent example of this. Thus a game fiction's complexity must be considered alongside the constantly abstract nature of significant information or what I term the 'constant of ludic abstraction'. As technology progresses in terms of graphical output (i.e. more 'real' looking computer generated graphics) increasingly 'realistic' representations are saddled on to systems that are no less abstract over time. Significant information does not stray from ludic abstraction and so this constant must be accounted for in depiction to some extent.

[30] The simulation fever some players felt with September 12th might be a result of its fiction being too complex for its relatively abstract mechanics (Bogost, 2006). Relative complexity might hurt a game that attempts to overreach thematically.

Although the fictional worlds that abstract games depict are often both representationally and ludically abstract they do still constitute minimal fictions even if their fictions are only concepts to be imagined (e.g. blocks, gravity or bubbles). Following from this, abstract game fictions tend to already be highly imaginable as they follow the framing principle (specifically through dissolution) almost exactly. The dissolution part of this principle states that a frame is created by the abstraction of fictional information in a game which abstract games naturally do. Practically speaking this means frames are created that aid imaginability e.g. *Pong* features a fiction that is appropriately abstracted to help imagine its significant information, this allows for a clear frame, 'table-tennis', to guide what we are to imagine the game as. Not only this but the minimal nature of abstract game fiction also abides neatly by the functional fiction principle. Because of the constantly abstract nature of significant information a game's fiction is less likely to contradict significant information if it maintains a functional relationship with it. Again, because the minimal fictional worlds of abstract games are already closely related to the significant information by virtue of framing, imaginability is easily achieved.

Koster's example of *Tetris* reframed as a concentration camp violates these principles by establishing a fiction that doesn't match the ludically abstract systems of Tetris and risks dysnarrativa. The key thing that abstract games demonstrate is that *'*relative complexity*'* must be considered. Not all games are equally abstract as they can vary in representational or ludic complexity. This difference in complexity leads me to suggest that the constant of ludic abstraction should be qualified. Because the significant information in *Tetris* is of a different degree of complexity to (for the sake of example) *Dark Souls*, *Tetris'* fictional information is thus relatively more constricted by the constant of ludic abstraction than *Dark Souls'* fictional information is.

We are left with three conclusions from this examination of representational and ludic abstraction. Firstly abstract games stand to gain a sense of intuitiveness from imaginability by including a representationally abstract fiction (e.g. *Pong's* fiction) via the functional fiction principle. Alternatively, abstract games will achieve imaginability by establishing ludically abstract frames of meaning via the framing principle (we understand gravity in *Tetris* even if it is not like real gravity). Despite lacking traditional fictions abstract games actually back up some of the principles discussed in this chapter. While it is hard to naturally think of *Twister, Go* or *Tetris* as having fictional worlds, they are informed by some concepts drawn from reality which help frame their fictional worlds or functionally link their operations (significant

information) to abstract fictional representations. The fiction they draw upon is representationally abstract in the sense that it constitutes nothing more than imagining very simple fictional analogues of real-world systems such as gravity or ball mechanics. The conclusion about representational abstraction here should not be taken as prescription one way or the other. It is perfectly fine for an abstract game to feature 'no fiction' (if it is possible) but it's indisputable that a game can be learnt more easily by incorporating that which is not purely significant information even if it is only to suggest the player imagine it rather than explicitly state it in the game. In conclusion, abstract games can benefit from the principles of imaginability, even though they very rarely need help to avoid dysnarrativa.

Secondly we have established that ludic abstraction is constant across all games. This necessarily limits the complexity of their fictional worlds if games are to remain fictionally consistent. While this might seem disturbingly limiting it does not necessarily mean that games cannot feature complex fictions but that it is very difficult for them to do so without causing dysnarrativa. Lastly the constant of ludic abstraction does not dictate how complex a game can be. This means that a more complex game (despite still being constantly ludically abstract) may feature a different abstract ruleset to a less complex game and so the significant information that can be reasonably fictionalised or framed is potentially greater than the less complex game. This leaves us with the following principles.

Abstract Consistency Principle - Abstract games work on the established functional fiction principle and framing principle although it is not obvious since their fictions are representationally abstract. Representational abstraction in games tends to make a game nearly invulnerable to dysnarrativa for this reason.

Relative Complexity Principle - This specifies that despite the constant of ludic abstraction, the complexity of a game can still vary to include rules that more comprehensively (but still imperfectly) model or simulate some concept that is represented fictionally e.g. *Tetris* is less complex than *Dark Souls* and so the functions of *Tetris* can only be reasonably fictionalised up to a certain point. *Dark Souls* (while its significant information is still ludically abstract) allows for relatively more wiggle room regarding its fictional and representational complexity. This could potentially mean the sweetspot is different for every game.

Constant of Ludic Abstraction Principle - Because significant information is inherently ludically abstract, one can almost treat this as a mathematical constant when considering how to conceptually or visually represent a game. Therefore

significant information is a constant limitation to the complexity of fictional information. A game's fictional information must account for this constant of ludic abstraction so that the gap between types of information is not too large. This often restricts the fiction and representational style of a game to simpler, more abstracted forms but it does not necessarily mean that this has to be the case. This principle is demonstrated by the fact that most abstract games almost never cause dysnarrativa since ludic and representational abstraction are often in harmony in these cases.

Representational Answers to Contextual Questions

The conclusions so far might suggest that representation would do well to sit in an ambiguous middle-ground between vague abstraction and comprehensive realism but this discussion is risky. Prescribing a specific representational style is not helpful and distracts from the discussion of how representation affects information in different games. Games, as I have said, are polymorphic and no specific style will help in every case. At first I assumed that ambiguity would be a useful trait of any game's representational style since emphasising ambiguity would avoid comprehensiveness but still give the imagination something to work with. However, one could argue that ambiguity can just confuse a game further. Several critics note how ambiguity may actually be part of the problem. Bogost notes that scholars such as Starr and Turkle suggest that 'the cure' [for dysnarrativa] is to make simulations that do away with or reframe 'ambiguities, omissions, errors or controversies' (Bogost, 2006, p.109). When it comes to dysnarrativa we intuitively want more clarity as the situations where dysnarrativa arises often provoke questions. Conversely, imaginability prompts us to answer these questions by making imaginative connections and subsequently imagining a consistent fictional world. Without prescribing a particular style, it must be determined if there is a good approach for representationally relating information in a game that is neither too comprehensive nor too ambiguous, The principles discussed under the banner of context in the first part of this chapter prompt players to ask the certain questions and representation helps the imagination answer them. What, then, is the relationship between representational style and information?

The Legend of Zelda (Nintendo Research and Development 4, 1986) (hereafter referred to as *Zelda*) is an action adventure game in which the player plays as the hero, Link, and must explore Hyrule on a quest to defeat Ganon and save the princess Zelda. Released in 1986, ***Zelda's*** graphical style was mostly determined

by the technical limitations of the console (the Famicom/Nintendo Entertainment System) it was developed for. As a result the game needed to communicate its fictional world and rules through very limited means. Character sprites on the Nintendo Entertainment System could only feature four colours at a time (three colours plus transparency in the case of many character sprites such as Link) and so Link is coloured green, brown and a light brown flesh tone with a transparent background (D'Angelo, 2014) (See Fig. 2.3.6). The number of pixels in the sprite is enough to show that Link is a humanoid swordsman. While graphical limitations are always changing it is interesting to consider cases where the representation is so restricted and must communicate certain concepts with those limited means. The number of pixels in Link's sprite is enough to show that he is wearing clothes as well as some unique physical characteristics such as his Elfish ears and pointed cap. Although Link is not given details such as a nose or eyebrows this is not typically a problem for *Zelda* players. The core concepts are enough to prompt us to imagine the rest of Link's physical appearance. Walton's supplementation rule is at work here, helping us fill in details that are not explicitly specified, but there may be something to the representation itself that aids imaginability.

Figure 3.2.6 - South-facing sprite of Link from *The Legend of Zelda*. by spriters-resource.com (2017).

Scott McCloud (1993) discusses the spectrum of representation in *Understanding Comics* and notes that visual depiction itself can have much to do with the

believability of a fictional world which is somewhat dependent on where it falls between abstraction and realism. McCloud (1993, pp.28-30) provides useful insight into the spectrum of representational styles and argues that the hierarchy of realism is important in establishing a representational style. Styles that tend towards abstraction are just as, if not more compelling than realism (McCloud, 1993, pp.28-30) but it is worth exploring what effect representational style has for imaginability since it is one of the major channels of communicating a game's information. McCloud describes the process of abstracting minor details as 'amplification through simplification' which is often used in cartoons and comics and demonstrated by *Zelda*. McCloud (1993, p.36) likens cartoons to mirrors while realistic depictions of people and things tends to other us from them by comprehensively emphasising differences between the author's idea of that thing versus an audience's own interpretation. Cartoons allow for a reduction of ancillary information. They focus ideas to minimal and simple components. They also allow for a greater range of subjective connotations. For example, a colon and a vertical line can be used to form a face on its side e.g. :). McCloud argues that at this abstracted level of representation imagination is freer to impose its own meaning. So much so that the face will encourage a high amount of empathy, prompting McCloud to liken it to a mirror (1993, p.36). Age, race, emotional disposition and gender are all undefined except by the audience's imagination. This quality of cartoons makes them effective for identification, whereas realistic styles are useful for objectifying or othering a subject (McCloud, 1993, p42-44). McCloud sums up the efficiency of representationally simpler styles for imaginability by emphasising the importance of the audience's imagination: 'and like the atom, great power is locked in these few simple lines releasable only by the reader's mind' (McCloud, 1993, p.45). Since representationally realistic styles tend to require comprehensiveness and more complex fictional worlds the limit to which they can be applied to ludically abstract systems starts to create a gap that dysnarrativa may eventually fill. When considering the relative complexity of a game and its inherent limitations (graphical or mechanical) it is important to represent the fictional world of that game appropriately. Game designer Will Wright (2004) took principles of representation that McCloud outlined and applied them when creating *The Sims* (Maxis, 2000). Although the characters of *The Sims* (Sims) roughly simulate real people they are simultaneously cartoons that help players identify with them. Sims use a gibberish language and emote in fairly exaggerated ways. Sims also have basic needs such as going to the bathroom, maintaining friendships and

managing money. These processes are simulated in a very rudimentary fashion and abide by the constant of ludic abstraction in that they are conceptual abstractions of complex real-world systems. The level of representational abstraction matches the ludic abstraction and so the relative complexity of the game is matched by an appropriately abstract representational frame. As a result *The Sims* has a high degree of imaginability.

McCloud's (1993, pp.52-3) model of representational styles, 'The Big Triangle', (See Fig. 3.2.7) is built on three axes and gauges all depiction between 'reality', the picture plane and meaning. *Zelda* demonstrates a balancing act between 'reality' and the picture plane, implementing a style that complements the requirements of its fiction and significant information. Even moving the face slightly towards realism requires some features to be objectively pinned down by the author of the representation. However, the face can also move further towards abstraction either in terms of visual abstraction or a move towards more subjectively interpreted representations that focus on the meaning of the depiction. McCloud argues that this constitutes a shift from visual to textual depiction i.e. a smiling face can be described as such. On the right side of the triangle there is a division where abstraction leads to greater interpretive meaning, eventually taking the form of written language.[31]

[31] McCloud proposes that words and images are part of a continuous spectrum since they both represent albeit by different levels of abstraction. Perhaps the same can be said for significant information in a game which represents (much like fictional information) but along a different degree of abstraction. If comics where words and images interact well are harmonious then we have a 'unified vocabulary' as McCloud (1993, p.47) puts it. The reason we don't is likely because of the separate genealogical origins of words and images (although these are more closely tied in some cultures e.g. Japanese ideogrammatic Kanji can be more imagistic rather than having an embedded phonetic meaning (McCloud, 1993, pp.48-9)). Bogost (2006) suggests unit operations as a way of understanding the means by which games can make meaning through procedural, rather than purely representational, content.

Figure 3.2.7 - The Big Triangle. by McCloud (1993, pp.52-3)

Zelda is a case where the representational style helps the perception of information through a simpler depictive style that encourages imagination and interpretation. As a result Zelda's representations mean that the game is easily imagined. This is not to say that all games should subscribe to a limited range of representational styles or mechanics but that certain styles in certain types of games may be able to negotiate connections between significant and fictional information more easily than others. Furthermore, this is not to suggest that *only* cartoonish art styles (like that of *Zelda*) are preferable. McCloud (1993, p.41) observes that cartoon forms make it seem like anything is possible and broaden the acceptable logic of fictional worlds. They make the inconsistent and unreal palatable. However to represent in this way means that much is omitted which the reader must imagine instead. The advantage of a more realistic style is that it can be more comprehensive to a certain degree (not necessarily totally comprehensive). A move towards representational realism may be useful for more complex fictions. Atkins (2003, p.100) notes in his examination of historical strategy games that, like propagandists and military historians, in their abstraction of historical narratives many gruesome and morally ambiguous details are omitted. If one were to make games on topics that cover the grey areas of reality then more comprehensive fictional worlds may be appropriate. The problem for games is that their significant information is somewhat chained to ludic abstraction which seems to benefit from more representationally abstract fictions. As well as ludic abstraction, a more comprehensive fictional world risks

dysnarrativa under the comprehensiveness principles and so representationally realistic game fictions are very hard to pull off without some dysnarrativa. A simpler style doesn't necessarily mean simpler content and this discussion of representation is not meant to discourage attempts at realistic fictions. It is meant to serve as a reminder that representational choices must adapt to encourage imaginative connections between fictional and significant information.

Like Walton, McCloud even suggests a guiding principle: 'A good rule of thumb is that if the readers are particularly *aware* of the art in a given story then closure is probably not happening without some *effort*' [McCloud's emphasis] (McCloud, 1993). The awareness of artistic style can affect the perception of a fiction and the effort McCloud refers to is likely related to forgiving minor dysnarrativa. *Zelda*'s style is effective as it allows us to understand what the designer intends (Link is a humanoid with a sword and shield) fleshes out details about the fictional world through imagination that are not comprehensively maintained by the depictive style (Link's specific features) and doesn't call attention to the artifice of the representation. Our imaginations fill these incomplete forms with meaning (McCloud, 1993, p.37). Because of the constant of ludic abstraction principle it makes sense that imaginability is most easily achieved (not necessarily best achieved) via simpler, cartoony fictions that invite players to imaginatively bridge the gap. Realistic, comprehensive styles are where imaginability runs into challenges and dysnarrativa may be more prevalent. This is not because representational realism is inferior, but rather because it is harder to imagine the significant information of games (restricted by the constant of ludic abstraction) alongside a representation that stylistically approaches reality.

In some cases the representational style may not be appropriate for how a game presents its information. In these cases the game's representation can lead to inconsistent answers to the questions the game proposes. *Dark Souls 2* (From Software, 2014) is a game that shows the critical importance of maintaining a vision of the whole when representing a fictional world with a certain style. The game features two particularly egregious cases of dysnarrativa. The first involves the progression through the world. As the player makes progress through the world, they may notice how environments will change abruptly from one to the next. In some areas, such as Earthen Peak, there is apparently no plausible way environs, connected by a short elevator ride, can be so drastically different. Closer examination of the collision data maps of the game's levels shows how areas connect. In figure 3.2.8 the collision data map of Earthen Peak shows that a central

elevator shaft sticks out of the top which is encased in the central tower of the level seen in figure 3.2.9. In figure 3.2.10 we can see the collision maps of Earthen Peak and Iron Keep have a counterintuitive spatial relationship. The journey from Earthen Peak to Iron Keep has the player take an elevator ride from the top of a lone tower, upwards, to an ancient city submerged in lava. Fictionally there is no indication the two locations are anywhere near each other and no supernatural force is implied to be at work but the game mandates that they are adjacent areas. For some players this was too much and violated the more contiguous world design found in *Dark Souls* where landmarks from one location are easily viewable from another. In a sense the representational style of *Dark Souls 2* veers more towards realism and so the expectation (partly informed by the game's prequel) is that the world will follow conventions of real environments in that areas will gradually change over the course of travel according to common-sense.

Figure 3.2.8 - Collision Data Map showing 'Earthen Peak' from *Dark Souls 2* taken from player-created Dark Souls Map Viewer software. by Dark Souls 2 World Collisions. [The collision data map seen here consists of information taken from the game's code by a third-party, the software required to view this data, as in the figure, has also been created by a third party and are not official tools for viewing the data. The image is a screenshot that has been taken from an imgur.com archive. Sources for this image and the software required to view the Collision Data Map are both included in the list of figures.]

Figure 3.2.9 - The central tower of ‘Earthen Peak’ as it appears in *Dark Souls 2*. by es.darksouls.wikia.com (2017).

Figure 3.2.10 - Collision Data Map showing the spatial inconsistency between Iron Keep and Earthen Peak taken from player-created Dark Souls Map Viewer software. by Dark Souls 2 World Collisions. [This image was created and obtained in the same way as noted in Figure 3.2.8].

The second case of dysnarrativa from *Dark Souls 2* occurs at the halfway point of the game. A shrine blocks the player’s progression to the second half of the game until the player can offer up the souls of the four old ones (very difficult enemy

encounters) or by gathering a million souls (an equally strenuous task). Lying next to the shrine is a fallen pile of masonry that is a little shorter than the player's character. The question many players asked here was why was the player character not able to simply climb over the fallen rubble to bypass the shrine, a task much more easily accomplished than fighting four of the most powerful beings in existence. The game does not allow the player to pass it which invites dysnarrativa. It is unavoidably odd for such a minor fictional obstacle to form an impassable gate for the player. Again the game's representations fall short of helping to answer questions about the fictional world.

I noted in the first part of this chapter that imaginability is principally created via context and representation. Early in this thesis I identified perception as a key battleground for reducing dysnarrativa but perception is not just the passive reception of information. As Gallagher and Zahavi (2008, p.7) state perceptions involve interpretations informed by context. From my discussion of the principles so far, one can imagine that principles to do with context (framing, implying functions fictionally) prime the audience into focusing on certain questions about the fictional world e.g. *Pong* frames itself as a game of table-tennis so we are inclined to ask 'what in *Pong* is similar to table-tennis?'. These questions are guided away from those questions that might lead to dysnarrativa e.g. 'why is the fictional world of *Pong* black and white?' 'What force manipulates the paddles?'. These questions are subsequently answered by representations in a game which communicate the information of a game more directly e.g. *Pong's* representations lead us to understand the pixels in the game as a ball and paddles and we accept the conceptual abstraction of table-tennis because of how easy Pong makes it for us to imagine. This process describes how imaginability is constructed.

'Show don't tell' is a common foundation of storytelling in many media but game designer Jim Crawford goes one step further. In a talk on preserving mystery in games and advises: 'don't even show!' (Crawford, 2015). Crawford cites the lingering impact of horror author H.P. Lovecraft's works on the audience's imagination. Crawford suggests that designers 'hint at, rather than describe, your world' so that the audience's imagination is stimulated to ask questions. Citing '*The Mound* (Lovecraft, 1940), a piece Crawford considers a less successful Lovecraft story, Crawford shows how questions can be raised by fictional works but they should not then provide 'answers that are worse than leaving the question unanswered' (Crawford, 2015). Crawford points out how *The Mound* raises an interesting question (people who go into the mound end up with their internal

anatomy reversed) but then offers a mundane answer (there are people in the mound whose job it is to reverse your internal anatomy). Crawford also mentions that a fictional work should not throw out questions constantly without ever answering the audience (he cites the television show *Lost* (ABC Studios, 2004) as an example). Being too comprehensive can simply cut out a step that is engaging for many players (as well as increasing the potential for dysnarrativa) and being too vague will not interest players enough to care to investigate (and potentially leave gaps too large to be closed by imaginability).

If one considers that representations answer certain questions about a fictional world then it can be said that, depending on the representational style, different questions will be answered. Crawford even makes this link in his discussion of mystery in games: 'It's worth pointing out, specifically that having an abstract visual style is a very powerful way of not answering every question' (Crawford, 2015). Crawford's observation backs up McCloud's suggestions about simpler depictive styles and this type of representation has the advantage of allowing the imagination to fill in answers to questions that the representation does not comprehensively answer. While abstract representational styles do risk being too vague they also maintain a degree of ambiguity which stimulates the imagination rather than leaving us with unsatisfactory answers to questions about the fiction.

If, as we have established, questions about a fictional world in a game are best answered only partially then this suggests that the style be 'partial' in the sense that it exists between pure abstraction and photorealism. The failings of *Dark Souls 2* point to what is successful about *Zelda. Zelda's* representational style communicates key information necessary for playing the game whilst also allowing the player to imagine details about the fictional world not explicitly given to them. An increase in the realism of the representational style of the game would require very careful negotiation of the fictional context for the significant systems in the game. It is not impossible but games do tend to make it hard to fictionalise every case, especially if they are set in a visually realistic fictional world. *Dark Souls 2* appears not to have a perspective of the bigger picture. Its representational style betrays the conceits of its significant information. Levels that must functionally join are not depicted in an imaginable way. *Dark Souls 2* shows how disconnectedness and implausibility arise when the representational style is not considered in relation to its significant information and thus it could be seen as an example of an (unintentionally) 'separated' game. While this section

has not resulted in a specific principle, it does highlight the importance of the interrelation of context and representation in achieving imaginability.

Conclusion

This two-part chapter has built an arsenal of fourteen principles that imaginability operates by. With it, it may be possible to identify, improve and generate imaginability so that dysnarrativa is reduced as much as possible. Many of the sections have reached similar conclusions about how significant and fictional information can be juxtaposed or represented. Many of the discussions above bleed into one another and so in the conclusion of this chapter I would like to simplify this list of principles so that imaginability can be clearly defined and identified with a mind to implement it in future designs.

Practical Principles for the Production of Imaginability

For organisational purposes let us collect the fourteen principles[32] we have arrived at:

Integration Principle - Creating a fictional world in which structural qualities of games (commonly repetition and death) are fictionally integrated aids imaginability.

Dissolution Principle - Creating a fictional world in which fictional information is thematically constructed around significant information aids imaginability.

Frame Principle: A stable frame aids imaginability by focusing attention on relevant information to be imaginatively joined and away from irrelevant information that would constitute minor cases of dysnarrativa.

Framing Principle: A frame is created either:

Integration: By providing a thematic context for the significant information in a game

or

[32] These principles were inspired by Kendall Walton's refinement of his thoughts on fiction by breaking down the validity of certain principles of fiction. I found his way of structuring the argument useful as it summarises the key points while also providing guidelines for the reduction of dysnarrativa.

Dissolution: By the abstraction of fictional information in a game

Functional Fiction Principle Imaginability is functional. Imaginability's goal is not to improve the quality of fictional information. Rather, it allows functional principles of significant information to be intuitively understood via the game's fiction and vice versa. Roles are just one example of this working in practice. In short, the fiction tells functions and functions tell fiction. Emphasising a functional relationship between fictional and significant information also tends to reduce contradictions.

Proportionality Principle Fictional information and significant information can proportionally outweigh one another so long as they do not contradict.

Separation Principle - To avoid the negative effects of dysnarrativa, frame a game around comedy, satire and/or horror, and/or emphasise dysnarrativa by employing the three branches of dysnarrativa. Paradoxically this will cause imaginability but on a metatextual level.

Spectrum of Imaginability Principle - There is a spectrum of imaginability. In other words imaginability can be achieved but to differing degrees of success.

The 'Star Trek' Comprehensiveness Principle - Increasing the amount of fictional information in a game as a way to comprehensively explain every part of the fictional universe eventually increases the likelihood of dysnarrativa.

Sweetspot Principle - The Spectrum of Imaginability Principle and the Star Trek Comprehensiveness principle indicate that imaginability is not meant (or able to be) completely comprehensive. It has already been established that a low degree of imaginability means that dysnarrativa is likely. High degrees of imaginability are not useful but neither is a lack of imaginability. Thus a 'sweetspot of imaginability' exists where a game is neither too representationally comprehensive nor too representationally vague.

Expectation Principle - Players have subjective expectations of representational realism that can be adjusted by framing.

Abstract Consistency Principle - Abstract games work on the established functional fiction principle and framing principle although it is not obvious since their fictions are representationally abstract. Representational abstraction in games tends to make a game nearly invulnerable to dysnarrativa for this reason.

Relative Complexity Principle - This specifies that despite the constant of ludic abstraction, the complexity of a game can still vary to include rules that more comprehensively (but still imperfectly) model or simulate some concept that is represented fictionally e.g. *Tetris* is less complex than *Dark Souls* and so the functions of *Tetris* can only be reasonably fictionalised up to a certain point. *Dark Souls* (while its significant information is still ludically abstract) allows for relatively more wiggle room regarding its fictional and representational complexity. This could potentially mean the sweetspot is different for every game.

Constant of Ludic Abstraction Principle - Because significant information is inherently ludically abstract, one can almost treat this as a mathematical constant when considering how to conceptually or visually represent a game. Therefore significant information is a constant limitation to the complexity of fictional information. A game's fictional information must account for this constant of ludic abstraction so that the gap between types of information is not too large. This often restricts the fiction and representational style of a game to simpler, more abstracted forms but it does not necessarily mean that this has to be the case. This principle is demonstrated by the fact that most abstract games almost never cause dysnarrativa since ludic and representational abstraction are often in harmony in these cases.

One can already see where revisions must be made. The integration and dissolution principle essentially both come under the framing principle as the two techniques are employed in framing. It should also be emphasised that a game can be both dissolved and integrated, they are not mutually exclusive routes to achieving a stable frame. A frame can be more succinctly defined under the framing principle and so the frame and framing principle can be joined. The functional fiction principle essentially describes more specific cases than frames would otherwise generally describe i.e. a role is sort of like a frame within a frame - a sub-frame.

The functional fiction principle's discussion of how significant and fictional should interact can be edited down to focus on its more uniquely useful aspects. The principle of function over quality is important to emphasise as is the tendency for contradictions to reduce in the presence of functional links and so this principle can remain in edited form. The proportionality principle is worth remembering as one should not worry about how much of each type of information is in a game, only the potential for their contradiction. The spectrum of imaginability principle is similarly useful and seems to be a fundamental attribute of imaginability. The '*Star Trek*'

comprehensiveness principle actually covers the same ground as the proportionality principle but since the caution is important I suggest that the proportionality principle be added to the comprehensiveness principle as a provision. The comprehensiveness principle is also important as it shows that imaginability is not meant to join every single piece of fictional and significant information comprehensively. However, because the '*Star Trek*' comprehensiveness principle acts as more of a caution for what is likely to cause dysnarrativa rather than a guideline for achieving imaginability, it could potentially be included amongst the branches of dysnarrativa rather than the principles of imaginability.

The sweetspot principle is built from the comprehensiveness principle and the spectrum of imaginability principle but is clarifying an important characteristic of imaginability that is, so far, only implied by previous principles yet is still useful to highlight. The spectrum of imaginability principle can reasonably be included in the sweetspot principle since a sweetspot is the most useful result of a spectrum existing not just the spectrum's existence itself. The constant of ludic abstraction principle is important to know but acts as a way of explaining why framing and functional fictions must happen. It is a sort of addendum to the framing principle and the functional fiction principles. Because significant information is abstract, integration and dissolution are the best route to imaginability through framing and because functional relationships are usually direct and simple it makes sense that significant information be tied to fiction in this way. The expectation principle and the abstract consistency principle are similarly clarifications of stipulations found in the framing and functional fiction principles and so these can be further revised with this in mind. The relative complexity principle suggests that the sweetspot for each game is likely to be different due to the differing degrees of complexity each game presents and subsequently what representations will reasonably lead to fictional consistency. Thus the sweetspot principle can be modified to include this caveat. The separation principle concerns an entirely different means of achieving 'imaginability' as it actively doesn't. However, separation is still worth emphasising as not all cases of dysnarrativa should be reduced. This fat-trimming leaves us with the following four principles and one new branch of dysnarrativa:

Framing Principle - A stable frame aids imaginability by focusing attention on relevant information to be imaginatively joined and away from irrelevant information that would constitute minor cases of dysnarrativa. A frame is created either by:

Integration: By providing a thematic context for the significant information in a game. Create a fictional world in which structural qualities of games (commonly repetition and death) are fictionally integrated. This helps adjust expectations of players going in.

or

Dissolution: By the abstraction of fictional information in a game. Create a fictional world in which fictional information is thematically constructed around significant information. (This is naturally very easy to do for abstract games).

or

Both

Functional Fiction Principle - Imaginability is functional. Imaginability's goal is not to improve the quality of fictional information. Rather, it allows functional principles of significant information to be intuitively understood via the game's fiction and vice versa. Function tells fiction and fiction tells function. Because significant information tends towards a constant of ludic abstraction, one can treat this like a mathematical constant when considering how to conceptually or visually represent a game. A game's fictional information must account for this to some extent so that the gap between them is not too large. This often restricts the fiction and representational style of a game to simpler, more abstracted forms but it does not necessarily mean that this has to be the case. Contradictions are made obvious by functional relationships between fictional and significant information and so emphasising a functional relationship between fictional and significant information also tends to reduce contradictions by easily bringing them to attention so that they can be identified early in development.

Sweetspot Principle - There is a spectrum of imaginability. In other words imaginability can be achieved but to differing degrees of success. It has already been established that a low degree of imaginability means that dysnarrativa is likely. The Comprehensiveness branch indicates that imaginability is not meant (or able) to be completely comprehensive and that certain degrees of imaginability are not useful but neither is a lack of imaginability. Thus a 'sweetspot of imaginability' exists where a game is neither too comprehensive nor too disconnected. Imaginability is at its strongest in this sweetspot but this sweetspot is different for every game due to the relative complexity of each game. More

complex games provide wiggle room for relatively comprehensive fictions while less complex games benefit from relatively abstract fictions to the point that abstract games are almost invulnerable to dysnarrativa.

Separation principle - To avoid the negative effects of dysnarrativa, frame a game around comedy, satire and/or horror, and/or emphasise dysnarrativa by employing the three branches of dysnarrativa. Paradoxically this will cause imaginability but on a metatextual level.

And, separately, another branch of dysnarrativa has revealed itself under the former principle of Star Trek Comprehensiveness - or more simply:

The Comprehensiveness Branch of Dysnarrativa - Increasing the amount of fictional information in a game as a way to comprehensively explain every part of the fictional universe increases the likelihood of dysnarrativa. Fictional information and significant information can still proportionally outweigh one another so long as they do not contradict.

Together these principles should make for a strong guideline for avoiding dysnarrativa by implementing imaginability.[33]

As a test I propose that the case study of the above scene from *Silent Hill* (See Fig. 1.1) be examined with these revised principles in mind. In this case the framing principle is being violated. The game is allowing for a state in which the fictional context is not organised alongside the significant information's affordances. It is enough for dysnarrativa to occur that a dog-shaped enemy and the mention of a dog in an unrelated piece of dialogue are able to occur together. The frame of *Silent Hill* could be said to be horror as both the fictional and significant information are working towards this concept as a goal. Their *dis*integration actually leads to the game feeling separated which can, naturally, make this specific case humorous. The functional fiction principle is being violated as the player character is, fictionally, shown to be inspecting a scene whilst in danger. Allowing the player the function to

[33] It should be noted that to use these principles effectively, one must take on a radically broad notion of fiction. I talk, in this thesis, about *Chess, Team Fortress 2, Pong, Dark Souls, Street Fighter 4* and *Rhythm Paradise* on equal terms when discussing their fictions. For the layman (even one well-acquainted with games) this is not a natural train of thought. It is much easier to spot differences in how these games engage us fictionally than to identify their operating structural similarities. I emphasise this to warn about the danger of conceptually restricting fiction to just cinematic or literary notions of plot, narrative and story. To limit the scope to only one type of game restricts the discussion to a core group of games that represent a literary ideal (i.e. games that resemble fictions in popular media). Game fiction structures are highly diverse and to appreciate how to construct imaginability requires an equally diverse conceptual approach to fiction.

inspect anything in the presence of a more immediate priority collapses the functional relationship between the significant and fictional information in this case. The sweetspot principle shows that imaginability is not occurring to a high enough degree. The game presents us with two pieces of information to be connected but the only way to connect these leads to realisation of the artificial nature of the fiction or a distractingly humorous observation, both of which are not explicit intentions of the frame. Again, to shift imaginability towards the sweetspot both pieces of information need to share a more relevant relationship. Either the dog enemy should not be able to access this scene or the player should be unable to inspect the scene in the presence of the dog-enemy.

In summary to achieve imaginability a game's context pushes the audience towards asking certain questions about the work (and away from questions that lead to dysnarrativa) which the representation of that work can then capably answer to give the audience the experience of a continuous consistent experience of its fictional world. Principally imaginability is achieved (and therefore dysnarrativa is reduced) by two methods:

Integration and/or Dissolution

Frames contextualise significant information (Integration - Giving a fictional context for the structural qualities of games) and/or abstract fictional information (Dissolution - thematically constructing fiction around the constant ludic abstraction of significant information) and functional relationships between fictional and significant information help understanding of both and call attention to how the two types of information interact.

Or

Separation

Intentional emphasis of the branches of dysnarrativa or the use of a frame of comedy, horror or satire.

Chapter 4: For the Game's Own Sake: Multiplayer Games and Dysnarrativa

Games seem on the face of it to be very different to stories and to offer opposing satisfactions. Stories do not require us to do anything except to pay attention as they are told. Games always involve some kind of activity and are often focused on the mastery of skills, whether the skill involves chess strategy or joystick twitching. Games generally use language only instrumentally ("checkmate," "ball four") rather than to convey the subtleties of description or to communicate complex emotions. They offer a schematized and purposely reductive vision of the world. Most of all, games are goal directed and structured around turn taking and score keeping. All of this would seem to have nothing to do with stories.

Janet Murray (1997, p.140).

Baseball, it is said, is only a game. True. And the Grand Canyon is only a hole in Arizona. Not all holes, or games, are created equal.

George Will (1990, p.294)

Introduction - Multiplayer Games

In Murray's view (cited above) we are reminded that games are primarily abstract experiences guided by fairly straightforward, if esoteric, goals and terminology. What could the games, that she specifically describes, possibly have to do with fictional worlds? So far I have made a case for how the significant information of games and the fictional information of game worlds might be joined but it is also worth examining if this is true for games of all types. Assessment of such cross application provides the core aim of this chapter. Games are an incredibly broad medium and it would be foolish to assume that games operate on universal principles without some investigation.

Fictional consistency tends to be a concern overwhelmingly pertinent for single-player games that attempt to tell a directed and engaging narrative. This thesis has as yet overlooked a close analysis of games that would seem, *prima facie*, to have very little to do with fictional concerns. Multiplayer games which, as the name implies, require multiple human players. Although such games often possess fictional worlds, they do not often find themselves being criticised by players for their fictional shortcomings. Of much greater concern in multiplayer contexts is whether the game is fair, enjoyable or how it can be experienced with other people. In this chapter cases taken from competitive multiplayer games and multiplayer games that possess a persistent fictional world or require players to role-play are examined to see if there is anything to be learnt for the reduction of dysnarrativa.

Before we examine these case studies of multiplayer fictions and if we are to address where dysnarrativa fits into multiplayer it is worth considering that fiction has not always been a primary motivator for playing a game. From a cursory overview, fiction loses out when going up against the other things that have drawn people to games: gambling, religious ritual, spectatorship, socialising with others or purely to pass time during a journey. Single-player games which tend to resemble traditional fictional media such as novels which focus on the interface between a one-person audience and a fictional world are a very recent norm. Indeed, fictional consistency was not a major concern in games or for players until relatively recently with the advent of home computer games which began to provide games that focused on a single-player-facing narrative. Multiplayer games, by comparison, are

more numerous and much older than single-player games and only a relative handful focus on fiction above all else.[34][35]

The game, as an artefact, is demonstrably polymorphic. Its focal appeal changes depending on the time, place and people that play it. Fictional consistency is one of many concerns games have aroused over the ages and often only within a subset of the entire family of games. Fictional consistency has no claim to any kind of ahistorical importance and Murray (1997, p.140) has expressed how the satisfactions provided by narrative and games are different and can often oppose one another, especially in abstract multiplayer games. A focus on fictional consistency in games is so relatively ephemeral in the grand scale of things one could be forgiven for suggesting it as merely a fad. But this thesis is not interested in what is popular, only in the goal of reducing dysnarrativa, wherever it exists in games. Dysnarrativa is a complex and subjective problem but it is also something that is very much a product of cultural sensibilities. Games with fictions are developed in a time when questions about fiction have come to prominence in popular discussion most likely due to comparisons between games and relatively recent media such as films, television and novels. This comparison stems partly from the discussions of representational realism in games (Atkins, 2003, p.16) and the loaned grammar of film in games that use virtual cameras (Atkins, 2003, pp.75-76) and the desire from critics that games might one day possess the same artistic merit as popular forms like film or literature (Atkins, 2003, p.23). This has led to the expectation that games will open up avenues of storytelling not possible in other media despite the apparent lack of fiction in the most popular games. The task now is to determine how fiction and dysnarrativa function in multiplayer games.

[34] Not all single-player games are rich in fictional worlds either. Some of the most popular, in fact, feature only abstract worlds. Solitaire, a family of card games, is played by only one player but its focus is on training the player to get good at the game for its own sake, not developing a fictional world. Many of the most popular single-player games of all time either have no apparent fictional world or do not privilege storytelling as a primary focus: *Solitaire* (Microsoft, 1990)*, Angry Birds* (Rovio Entertainment, 2009)*, Candy Crush Saga* (King, 2012)*, Plants vs. Zombies* (Popcap Games, 2009), *Pacman* (Namco, 1980), *Donkey Kong* (Nintendo Research and Development 1, 1981) and *Space Invaders* (Taito Corporation, 1978).

[35] The majority of the most played games on streaming service twitch.tv are competitive multiplayer games (Newzoo, 2017), the majority of best-selling games for the year 2015 were multiplayer games (Entertainment Software Association, 2016, p.11), 54% of the most frequent players play with others and 51% of frequent players play a multiplayer game at least weekly (Entertainment Software Association, 2016, p.6).

Before dysnarrativa can be discussed in the context of multiplayer games we must first understand exactly how fiction itself is integrated into them. At first glance a multiplayer game would seem to be satisfying a different itch to single-player games. Multiplayer games tend towards abstraction with complex metagames focusing around the rules the game presents. In more casual multiplayer games, such as *Monopoly* (Parker Brothers, 1933), the drama of a *player's* reversal of fortune is perhaps more compelling than getting invested in the misfortunes of a fictional character (what Klastrup (2008) refers to as a player story). The interesting thing about multiplayer games, for most players, tends to be the interaction with other players even if it is just because a human player makes for a more compelling opponent than a computer does. The presence of others in multiplayer games can shift the focus to competition or co-operation rather than immersion and so it is worth examining how multiplayer games that focus primarily on a fiction are able to guide players in that direction. Playing with other people also tends to bring to prominence the real world, as the presence of real people is more 'believable' than any fantasy world and often forms the focus of the player experience in multiplayer games. However, there are examples that demonstrate a deep collective engagement with fictional worlds in multiplayer games which this chapter will examine. *Baseball* (trad., c.1845), *Eve Online* (CCP Games, 2003) and *Dungeons and Dragons* (Gygax & Arneson, 1974) form the case studies of this chapter to see if the concerns and conclusions of this thesis have anything at all to say for this category of games and is there anything to be learned from how fiction operates under the unique restrictions of these types of games. This chapter addresses the issue of how exactly dysnarrativa relates to multiplayer games and whether there is anything to be done about its reduction in these cases.

The Presence of Others - The Common Motivation

One problem multiplayer games have with regards to fictional consistency is that they are played in the presence of others. Fine characterises this potential problem saying 'Even in the players' wildest flights of imagination we find the obdurate social reality of the "real world."' (Fine, 1983, p.80). This can draw attention away from, or towards, fictional worlds depending on the motivations of players. A common train of thought is that fiction is a secondary concern for competitive multiplayer games. The argument follows the belief that social interaction and in-game achievement generally tends to trump the collective desire to engage in a fiction. As a result most

multiplayer games generally do not feature an extensive fictional world and this fictional world is not related through typical storytelling methods while the game is in play. However, this is not to say fiction serves no purpose in multiplayer games as there are multiplayer games that do present fictions. As discussed in the previous chapter, multiplayer games like *Team Fortress 2, Pong* or *Chess* use fiction-framing devices to communicate the rules and goals of the game without explicitly referring to them in every case. Character designs of the classes in *Team Fortress 2* being a clear example of how a fictional element informs play.

Massively Multiplayer Online Games (hereafter MMOGs) and Multiplayer Online Battle Arenas (hereafter MOBAs) feature extended fictional universes that are developed in various paratexts[36] however there is no explicit narrative communicated in a given match of *League of Legends* (Riot Games, 2009) and the player is constantly aware that they are one of many heroes of the same story relayed in MMOGs like *World of Warcraft* (Blizzard Entertainment, 2004). There is an implicit narrative of opposition in competitive games between teams but it is kept fairly abstract (e.g. red team versus blue team) and will be slightly different in every multiplayer match. The fact that there are multiple players also challenges traditional notions of narrative. Not only are there multiple audience perspectives operating simultaneously, there is an unequal interest, if any, in the game as a fictional experience.

In a study into the multiple existing motivations to play multiplayer games, Yee (2005, p.12) notes that players who play MMOGs for longer are less likely to be immersed in the fictional world they present. While immersion is one of the three major motivations for engaging with MMOGs (the other two being for the purposes of in-game achievement and/or socialising) only one subcomponent of the motivation of immersion (role-playing) explicitly relates to fictional storytelling (Yee, 2007; Williams, Yee and Caplan, 2008). Yee (2005, pp.26-33) notes that players that do engage with fiction either do so with others who are equally motivated or they frame their experiences of fiction as if they were playing the game as if it were single-player. The motivation to play a multiplayer game can be flexible and multi-layered and though fiction can always be a part of any player's desire to play, it is

[36] Paratexts are objects that surround a text (in this case a game) that aid our intertextual understanding of that text without us directly engaging with it. In this case this can range from game trailers, comics set in that game's universe, articles in game magazines, fan-made content, developer diaries etc. The term was first used in a game context by Mia Consalvo (2007), explored further in a multiplayer context by Carter (2014) and was originally used by Genette (1991).

not always the primary motivation. Multi User Domain (MUD) designer Richard Bartle's (1996) player type theory categorises player types into four distinct groups (explorers, achievers, killers and socialisers) but Bartle's taxonomy only mentions interaction with 'the world' for explorers and achievers. Bartle does not suggest fiction as a significant motivator for the types of player he theorises although Bartle's theory does not discount fictional role-playing altogether (none would dispute it exists in most MMOGs). Regardless of whatever motivates one to play multiplayer games the presence of other players is typically a large factor in the decision to play them.

Players can be affected by the presence of others. For example, players may be trolled by other players who are not interested in helping prop up an imaginable fictional world. Players may be drawn into the social realities of their playing group that distract from a consistent fictional world. The mere presence of other people reminds one that they are not special in MMOGs which explicitly call the player out as a chosen hero such as *World of Warcraft*. The knowledge that everyone is doing similar quests and engaging with the same fictional world with little personal impact upon it could also potentially cause dysnarrativa. The presence of others is inevitably considered during the design of multiplayer games and this is at the forefront of MMOG design. Taylor (2004) notes of a class designed for a MUD '...built into the very body of the character are mechanisms for community via the chat channels, friends lists, and "sensing" mechanisms. The programmer who created this class was clearly invested in providing a particular method of embodiment for its users and explicitly fostered specific social interactions and engagements through it' (Taylor, 2004, p.262). To illustrate the importance of other players in designing multiplayer games further Taylor cites a quote from an IGN interview with MMOG designer Brad Mcquaid: 'For example, Brad McQuaid, EverQuest co-designer, has said that, "Community is relationships between players, whether it be friendly or adversarial, symbiotic or competitive. It's also a form of persistence, which is key to massively multiplayer games" (Jonric, 2002)' (Taylor, 2004, p.264). All design decisions will shape and guide the behaviours and motivations of players in the game. When implementing anything in a multiplayer world (from chat clients, to emotes, to player interaction mechanics) social, political and legal issues must be considered which extend outside of the fiction. No game is a bubble when other people become involved.

In multiplayer games where fiction is less prominent the competitive nature of multiplayer games often necessitates that players play efficiently or at least prioritise

winning a match as a goal, anything else is a distraction. As a result fictional qualities of a multiplayer game tend to emphasise aspects unique to multiplayer rather than try and interrupt social interaction or competition with a detailed fiction. One way of looking at multiplayer games may be to conclude that the presence of other people in the fictional world alone constitutes such a serious dysnarrativa that we do not really believe in a fictional world while we play with others. Dysnarrativa may even increase with the number of players until there is nothing resembling a fiction, let alone a consistent fiction. Dysnarrativa becomes such a big issue that it ceases to be an issue and is dismissed altogether. It is not beyond possibility that multiplayer games can feature fictional worlds as a primary draw yet multiplayer games would seem ill-suited to portraying fictional worlds given that there are others present that might disrupt the fiction in some way.

The presence of others brings us back to the reasons people play. In Bartle's (1996) work he mentions the relationships between player types and how these are almost as important as the types themselves. In a single-player game (regardless of the fiction it presents) the player is choosing to play for their own reasons. This is also true of a multiplayer game. Individual players will come to a game with their own reasons for playing. No matter what the reasons players playing a multiplayer game play it for, they must all acknowledge that they are willingly playing with others. This constant among players of multiplayer games is where the focus of play resides. While the reasons for playing *can* differ (one player may be playing for the story, others might be playing to compete or to annoy other players), it doesn't mean that they always will. There are spaces, for multiplayer games, in which the reasons for playing are all in alignment and these reasons will require the presence of others.

The presence of others is the single constant that is necessary for all multiplayer games. In tournaments where games are played competitively to a high standard, especially under the jurisdiction of a sports organisation, all players are under no illusion that they are playing for the purpose of competition. Even a player who subversively chooses to participate merely for fun, to practice or to be a spoilsport still acknowledges the common reason for playing in such a space (regardless, their reasons for playing will still necessitate the presence of others). In the space of a tournament, competition is a *common motivation*. What about multiplayer games in which the common motivation is a desire for fictional immersion? Is there anything to be learned from these cases that may help us reduce dysnarrativa in games? Attention now turns to several case studies of multiplayer games that can help the discussion.

Fantasy Role-Playing Games - Negotiated Fiction

Multiplayer games have been recognised as making immersion in a fictional universe difficult unless all participants are willing (Murray, 1997, pp.115-116). I would like to examine multiplayer games where role-playing a fictional character alongside other people is the core focus of the game. These games are termed fantasy role-playing games ('FRP' for short) by Fine (1983) and include games such as *Dungeons and Dragons* or *Chivalry and Sorcery* (Edward E. Simbalist & Wilf K. Backhaus, 1977). These games emphasise the construction and enjoyment of completely fictional worlds as a primary goal but this requires the players, through a common motivation for fiction, to all be in agreement on this goal. *Dungeons and Dragons*, a descendant of historical war-gaming,[37] is a good example as it require players to co-operatively roleplay fictional characters while one player acts as an improvisational author/designer. This latter player, the referee (often referred to as the 'dungeon master' or 'DM'), plans enemy encounters, describes fictional spaces and keeps track of dice rolls that determine whether players are successful in their efforts to interact with the fictional world. In this discussion of FRP games I will look at several aspects common to them that relate to communicating a fiction for multiple players: negotiation between players, dice rolls, role-playing and the limitations of FRP.

In his sociological study of FRP gamers, Fine notes that FRP games are generally co-operative games with the goal of enjoying a fantasy world rather than 'winning' or demonstrating strategic skill or mastery (Fine, 1983, pp.6-7).[38] Role-playing and the fictional world are related verbally and the rules exist to give structure to what is a highly flexible game. While a descendant of war-gaming, FRP games are a lot more flexible both in their rules-based affordances and their fictions. Fine notes that FRP is partially characterised by flexible negotiability in its rules: 'In FRP gaming rules

[37] Tabletop war-gaming, with its focus on historical reenactment, can be seen as a rare early example of games prioritising fictional consistency through historically accurate rules (although the outcomes of these games can deviate from history)

[38] There are cases, that Fine (1983, p.172) mentions, of competitive Dungeons and Dragons tournaments and so fiction is not always the focus. Fine (1983, p.212) notes the tension between Dungeons and Dragons as gameplaying or roleplaying. In FRP tournaments held at conventions, success 'is determined by the number of creatures killed and goals accomplished'. Whereas others might judge a well-played game as one in which players roleplay accurately, even if this results in a ludically sub-optimal set of plays. Whatever the motivation, fantasy role-playing calls to mind DeKoven's philosophy on the 'well-played game'. 'The well-played game is a game that becomes excellent because of the way it's being played' (DeKoven, 2013, p.xxiv) not necessarily one where the game is played to win.

and outcomes do not have the inevitability that they possess in most formal games; rather, both features are negotiated, and rules are adjusted by the referee and his group' (Fine, 1983, p.8). Not only are the rules more negotiable but the fictional worlds of these games are highly flexible. FRP game rules are often geared towards the co-operative engagement with a fictional world although this is not the only type or way that role-playing games are played. Although some FRP games do focus more on ludic mastery or may do so because of their flexible rulesets the way in which those FRP games that do focus on fictional coherence is the focus here. Some constants like different races, physical laws and canonical magic are specified by the game's rules but specific locations, histories, characters and narratives are often freely invented by referees and then explored by players under the referee's guidance. Referees tend to work with players on the fly to create something they all enjoy which is an aspect of these particular multiplayer games which leads to me to suggest that they hold promise for determining how to reduce dysnarrativa.

In a single-player game, commonly video games, the game has been designed by someone (or a group of people), usually not the player. I suggested in the first chapter that the problem of dysnarrativa could be viewed as conversational in its structure. The designer of the game is always making fictional statements through fictional information in a game which are then interpreted by a player. To simplify, if the player 'agrees' with these fictional statements then they successfully imagine and hopefully enjoy the fiction the game presents. In chapter 1 I introduced the idea of a conversational loop between the player and the designer of a game. To simplify further, I propose that a *negotiation loop* exists in games similar to the looping model created in chapter 2 (See Fig. 2.3). Dysnarrativa occurs when a player 'disagrees' and breaks this loop. One of the disadvantages of single-player games is that the fictional authority, in this case the designer, cannot step in to clear up dysnarrativa. Game designers must plan ahead and register their half of the 'negotiation' before the game has even begun. In FRP gaming, because there is a common motivation for engrossment in the fiction, the game's design is content to let a specialised player take on the role of fiction-negotiator through the referee. Not only is the design of the game flexible to the needs of fiction, the referee and players are literally negotiating constantly on the game's fiction during play. This constant negotiation means that the relation of fictional information is more active and often improvisational.

An interesting discussion FRP raises is to which authority players defer to in cases where dysnarrativa seems likely - the designer's rules or the referee's interpretation. FRP games have designers in the traditional sense but the game encourages the referee to be an active author and authority during play. Nevertheless some refer to the original author for certain clarifications, to mixed success. Fine relates a case from *Dungeons and Dragons* designer Gary Gygax: 'Gygax claims that he once received a letter asking how many eggs a hippogriff lays. The creator is taken as *the* expert on all questions relating to his game, even though the facts requested may have no meaningful bearing on the game' [Fine's emphasis] (Fine, 1983, pp.33-34). There are cases where players appeal to the ones who created the game and the link between author and work is a natural one to make. M.A.R. Barker, creator of FRP game *Empire of the Petal Throne* (M.A.R. Barker, 1975), received many questions and queries from players and sometimes incorporated player stories into the overworld in his own campaigns as alternate universes.[39] Fine notes how the referee is often referred to as 'God' since they guide the outcome of events and maintain 'ultimate interpretative authority' (1983, pp.72-73). In this way their role is fictionally understood as metaphysical, as playing the fictional world itself. Some players even refer to the referee as 'storyteller' or 'playwright'. It is clear from these metaphorical labels that the referee is somewhere between designer and player. This is much like how the umpires and referees on the pitch of a popular sport are in the field of play to facilitate but not engage in play themselves. The only difference is that an FRP referee has the added task of relating the fictional world.

Disagreement with a referee is not uncommon and my idea of a negotiation loop is not impervious to subjective disagreements just because the players are able to talk face-to-face about their dysnarrativa. Ideally civil players would naturally come to compromises and agreements but this is not always the case. Eventually a stubborn disagreement must appeal to a 'higher power' than the referee alone. Rules exist in versions of *Dungeons and Dragons* that explicitly account for these events. An extract from the *Advanced Dungeons & Dragons Player's Handbook* reads 'Cooperate with the [referee] and respect his decisions; if you disagree, present your viewpoint with deference to his position as game moderator. Be prepared to accept his decision as final and remember that not everything in the game will go

[39] Because of the extreme detail with which Barker describes Tekumel, *Empire of the Petal Throne* has been criticised as being 'too personal' a fantasy (Fine, 1983, p.135). Some feel that only Barker can referee it since he is so directly connected to that world as its author. Yet Barker insists that players interpret it their own way. The point, in Barker's eyes, is to fantasise not to adhere to scripture.

your way!' (Carr 1978, p.2 in Fine, 1983, p.107). While a smug referee might flaunt his authority with a passage like this we must remember that rules like this are evidence of designers appealing to the players' own common motivation for fiction, not an arbitrary authoritarian ruling. A 'metarule' of FRP gaming is that there are no rules, only guidelines. This is even reflected in the rulebooks for *Dungeons and Dragons* and *Chivalry and Sorcery* (Fine, 1983, p.115). The referee is encouraged to adjudicate which in some cases requires that they invent a 'house rule', a unique, original rule that settles potential disagreements, which is encouraged as long as they are enforced consistently (Gygax & Arneson, 2003). Consistency is encouraged for fiction as well as rules (Mearls & Crawford, 2014, p.4) but this emphasis on consistency is always justified as being for the benefit of maintaining player interest and agreement in FRP. In a sense the ultimate authority that binds a game to follow a fictionally consistent form is the common motivation of all involved. This includes players, referees *and* designers and so the authorial power that dictates the consistency of the fiction is shared between them.

In FRP games, such flexible negotiation of fiction requires an equal flexibility on the part of all who play. Fine cites players that are sticklers for their own particular interpretation of the rules and suggests that they have two options in cases where only they disagree: 'This situation is complicated by each referee's idiosyncratic interpretation of the rules, and players must abide by the "house rules". A player in a group for the first time may discover that the rules he knows have only a modest bearing on the game he is now playing, and he is thus obliged to argue with the referee' (1983, p.111). This is another strength of multiplayer games when it comes to resolving fictional inconsistencies. While a single-player game is at the mercy of a single person's subjective interpretation, players of FRP games are under social pressure to compromise in minor cases of dysnarrativa. Multiplayer is somewhat communal in that players who disagree will sometimes have to take some dysnarrativa on the chin when the majority vetoes a certain interpretation one way or the other. In single-player games there is a possibility that the lone player sees the invisible designer as the opposition and, because they are not present, are able to be less polite with their scrutiny than they would if a referee and other players were in the room or personally known to the player. Diversity is also a strength as one player's imagination may not have the same interpretative range as four imaginations and so players can suggest ways to imagine discrepancies in significant and fictional information to one another. This flexibility to negotiate fiction and game rules doesn't mean 'anything goes'. These games are logically

constructed, negotiated and enacted by players and the focus on flexibility allows problems to be resolved through dialogue with other people of a common motivation. Despite a large number of multiplayer games eschewing fiction altogether, it is clear how multiplayer can inherently make fictional consistency easier to achieve through negotiation.

I mentioned dice rolls in chapter 3 as an example of how to join fictional and significant information through functional relationships between different aspects of a game. Being a basic method for primitive number generation, dice often fill the fictional role of 'fate' or a way to simulate the uncertainty that exists in the outcomes of events. Rolling dice dictates many of the fictional events common in FRP games and forms yet another authority that players must appeal to, that of the game's significant information. Player's can influence other aspects of the game but their characters literally live and die by the dice. Whether favourable or not, dice rolls are subsequently given a fictional interpretation alongside their ludic function. For instance, rolling an '18' (out of a possible 20) might indicate that an attack with a sword was more spectacular than it would have been had the player rolled a '9'.

While players may fear an unfortunate dice roll, referees do not have a 'stake' in the outcomes except to make a reasonable interpretation of the roll (Fine,1983, p.102). This presents another interesting case where the authority that determines the fiction is disputed but also resolved through negotiation. In this case the authorities in negotiation are the referee and the dice. Referee decisions are not beholden to dice rolls especially when concerning fictional consistency. Referees must create a coherent plot for the players and dice rolls can interfere with this. Referees may put logic before chance and negotiation can be seen to exist between referees and significant information in certain cases:

> *GAF* [Gary Alan Fine]: To what extent do you think referees use the actual rolls they get to determine what happens?
>
> *Brian*: For basic reactions I find that I use, and most referees use, logical rolls.
>
> *GAF*: What do you mean?
>
> *Brian*: They use logic above the rolling, unless the rolling agrees within the limits of the logic. You know, you give a peasant, a beggar a couple of gold pieces, he's not gonna try and kill you… he'll be grateful. But I mean in the rolls you can technically get a roll that will allow the beggar to attack on sight, and kill you after you've given him the money…. And that's kind of unrealistic….The referee uses his own discretion, and the dice rolls just back

> up his ideas, you know, just make them more definite. [Fine's Interview] (Fine, 1983, p.103)
>
> They [players] would not want to run the risk that a random wandering monster kills of an entire party just because the gamemaster rolled some freak dice results, or that the story is short-circuited because of the odd chance the players found a magic ring that grants them three wishes. (Dormans, 2006)

Disputes are normally solved by some combination of dice-rolls, appeals to logic or social pressure on the referee or players. Negotiation is, again, the arbiter where a single authority (in this case the dice) does not have an indisputable solution to a potential case of dysnarrativa. As Fine puts it: 'The dice are used in *conjunction* with the logical structure of the game, although most referees give the aesthetic logic priority' [Fine's Emphasis] (1983, p.105). The authority on fiction in a game can change from one minute to the next and requires a fluid, negotiable stance. There are cases where creative solutions must be applied in the absence of an absolute rule, indeed rules may be bent in these cases either to maintain consistency or so that play may continue.

The flexibility that negotiating fiction provides comes with a price and there are several limitations it presents. Each individual session of *Dungeons and Dragons* is quite different and, despite claiming to eschew rules, they do feature voluminous rulesets that attempt to account for all possibilities. In order to navigate these rules without contradiction, players must be heavily involved and highly knowledgeable. Not only in role-playing their characters but also in terms of time investment required to learn about the world, races, spells, preparation of character sheets and campaigns as well as long periods of time set aside for satisfactory play sessions. The negotiation of dysnarrativa might require a thirty minute discussion on what is the most logical interpretation of a rule governing a fictional event. Fine observes that: 'The overabundance of rules [in FRP games] leads to debates and arguments as to how to play the game, particularly when players are novices' (1983, p.110). An imbalance in skill can be a problem as novice players present an inherent limitation for the fictional consistency of fictional worlds in games for other players. If a novice player plays a fictional character that is fictionally established as able and agile, the fumbling lack of control a novice displays could be taken as distracting, especially alongside other, more skilled players. Fictional consistency might be sacrificed for the immediate real-world concerns about players.

I have noted several times how dysnarrativa can often lead to humorous results and in FRP gaming this is no different except that humour (through social pressure) can

even be a way of maintaining fictional inconsistency in some cases. Disagreements about minor fictional inconsistencies may become points of humour for referees who wish to twist fictional statements from subversive or lazy players. An example one referee gives is:

> A lot of people want to be clever; they'll invent the cannon. And I'll say, "Fine, what metallurgical processes do you wish to apply to refine the iron ore to this quality?" and they go, "Huh? Doesn't somebody know?" They don't really know themselves how to do it… You know, you're acting out of character, so I'm not going to give you the benefit of the doubt [Fine's own interview] (Fine, 1983, p.189).

Just as there are tensions between Stanley and the narrator in *The Stanley Parable*, similar subversions must be carefully negotiated by referees of FRP games. A player should not implement their knowledge of modern physics in their medieval fantasy role-playing if they want to maintain consistency. Even though the player's attempt to invent a cannon is treated as invalid sometimes players will be forgiven for using turns of phrase or cultural mores that would be alien in the fictional world of the game. However, it is no stretch of the imagination to suggest that there are FRP groups that do demand one be 'in character' the entire time, possibly going so far as to speak a fictional language. As long as the common motivation is met and negotiated by all parties the focus tends to fall on consistency, not total realism. In the above example subversive players are encouraged to remain aware of the pretense and thus remember the common motivation for engaging in a fiction.

Since fictional worlds require the player(s) to partially imagine details the referee does not tell all about the world explicitly to the player. The referee must control the amount of information the players have so that they can enjoy the fantasy without either party seeming unrealistically omniscient. The referee is inherently limited in their depiction of the fictional world in FRP games since the means of conveying the world is subject to ongoing oral discussion. Unlike a static crafted single-player game they cannot know every single detail beforehand and much of the direction of *Dungeons and Dragons* is guided by responses to unexpected outcomes which is a boon and a burden for similar reasons. Dysnarrativa, where it might appear, is flexibly negotiated but long-term consistency may run afoul of the Comprehensiveness branch of dysnarrativa as each newly improvised fictional situation falls under scrutinised comparison against past events. This is why Fine emphasises the importance among players of mutual support and framing: '...because a referee's fantasy is shared by others and manipulated by them, a common frame of reference is necessary' (1983, p.80). This becomes tricky when

the control of information must be managed in an asymmetrical relationship (such as the referee and players') but the ability to negotiate is always a reliable option for players of multiplayer FRP games. Social information is a concern in multiplayer games but it is useful for maintaining collective interest in a game's fiction.

Role-playing is the means by which players enter the fictional world of a game and it forms a core part of most FRP games. While information can be managed by rules and dice rolls, the issue of role-playing itself brings us back to the prominence of reality as a problem in multiplayer games. For example, discrepancies between player and player-character knowledge require a lot of negotiation. Where this information discrepancy (between the audience and fictional characters) is used for dramatic reasons in literature, theatre and film, it cannot be similarly implemented when a player expects to have comparably useful knowledge that informs them and their character simultaneously.[40] Fine puts it this way: 'While the person [the player] *is* the person [the player character] he is playing, he [the player] only knows a limited amount of information about that person [player character] and is unable to generate more knowledge' (1983, p.194). While this requires an individual player to negotiate their own role-play, the presence of other players calls to mind the movement between game fiction and extra-ludic discussion. This potential ambiguity the frame of reality brings when engaging in a game's fiction is reflected often through the doublespeak mentioned earlier. Fine uses the statement "Did you kill James?" as an example (1983, p.200). The sentence combines fictional information, the death of James' character, with significant information, there is a player whose real name is James. It is remarkable how quickly ambiguities of this nature are resolved when casually discussing FRP games and if there is any confusion then we return again to negotiation.

Fine identifies three layers of meaning that are negotiated through role-playing in FRP games suggesting that gaming is grounded by: 'commonsense understandings that *people* have of the real world' [Fine's emphasis] (1983, p.186), the game

[40] An infamous example of player and player character knowledge discrepancy causing dysnarrativa can be found in the adventure game *L.A. Noire* (Team Bondi, 2011) where the player character is revealed, late into the game, to have been adulterous for some time, even while the player was controlling the character directly. This revelation seems odd given that the player generally shares knowledge with the character. Their private life is private even to the player which may lead to feelings of disconnection and distrust of the game's 'narrator'. While an unreliable narrator-protagonist can be dramatic in non-game fictions it is likely to be unforgivable in games as players reasonably expect to know everything their character knows.

context (rulesets and conventions) and roles. Brown outlines the three layers, that Fine suggests, as negotiated roles:

> ...person, player and character. The role-playing consciousness, according to Fine, exists on all three of these levels simultaneously, although the personal level is not bound by the rules of the game, the player level is aware of them and the character level bound by them diegetically to the point where the character is a negotiated entity shared by the gamer and the designer/referee. (Brown, 2012, p.208)

These three roles require different accommodation by multiple players in unison. The 'commonsense understandings' echoes Walton's (1990) supplementation rule by which it is assumed that fictional worlds are logical and faithful to expectations of reality unless stated otherwise. The latter two layers of meaning reflect the functional fiction principle I established in the previous chapter. Roles are understood as a player's understanding of a fictional role combined with the significant information (what Fine calls the 'game context') that defines their actual limitations and affordances in the game. As Brown and Fine suggest, the three layers are really three separate contexts that inform understanding of one another. This would appear to be difficult to navigate if one considers that, especially in multiplayer games, the 'real' context of a game and its rules must be understood alongside its fiction (or even be used to understand fictional occurrences), but examples of imagination in action show how imaginability can counter the 'interference' of actual events and even exist harmoniously with them through negotiation.

Consider the following case. There is always a conceit, in FRP games, that players are unlikely to want to play an average, unlikeable, poorly skilled or inconsistent character. Generally it is preferred that the character be flawed but with some interesting or positive characteristics. An example of imaginability in action, which Fine identifies as social constructiveness, shows how 'players working from scant, sometimes contradictory information attempt to construct a meaningful identity' (Fine,1983, p.216). In other words, how players negotiate significant information that appears to be at odds with fictional information. One of Fine's field notes shows such a negotiation:

> The character I had rolled up was a thief with an alignment of three (meaning he was a "good" person). I asked Don about this saying that it didn't make sense. Don looked at my characteristics and said that it made "perfect sense" in terms of my Wisdom of 3 (of a possible 20 - "Foolish"). Don comments, "You always do what you consider right, but sometimes you have difficulty deciding what is right. Daddy was a thief and you feel that if

> Daddy does it, it must be right because Daddy is a good guy and only steals from bad guys." [Fine's field note] (1983, p.216).

The dice, which constitute significant information, gave Fine an alignment of three for a fictional role he intended to play. Fine's own 'commonsense understanding' of reality leads to an interpretation of a thief being incongruous with a morally good world-view. Yet the opportunity to negotiate this role's function and fiction with another player allows for a potential dysnarrativa to be resolved. The negotiation loop in which player and designer agree or disagree is shown here to be working in real time.

Brown suggests that the 'game-playing-role' is what players require to negotiate game fictions evenly and consistently. Brown is correct in saying that 'the game form makes its audience more likely to suspend their disbelief and take on a gameplaying-role, since the alternative is privileging one side of the experience to an excess which will be made apparent through the form' (Brown, 2012, p.226). If imaginative connections are not made we will tend to favour either significant or fictional information and that the game-playing-role is a frame of mind that helps join the two. The negotiation loop, as I have suggested, is an extension of this idea that places the onus of dysnarrativa's resolution on all parties rather than any one player (regardless of whether the game is single-player or multiplayer). The negotiation loop, by virtue of a player being in dialogue (with designers, referees, other players or information in the game) is a form of active interpretation with the goal of forming a consistent experience.

Similarly to Brown and Fine, Dormans (2006) identifies the real-virtual ambiguity in role-playing: 'Playing roleplaying games is an experience that incorporates three important factors. It is at the same time narrative, social and ludic' (Dormans, 2006). These three factors along with Fine's layers and Brown's game-playing-role suggest that in multiplayer games there is an additional category of information that informs fictional and significant information. For now it could be termed 'social information' that communicates information brought about by the presence of others which is simultaneously real and virtual. This type of information is perhaps only of concern in multiplayer games but may explain how player stories are able to exist somewhere as both fiction and reality as well as how players are able to navigate fictional, ludic and social contexts simultaneously while maintaining a grip on the fictional world of FRP games. This is perhaps what differentiates the role-playing in games from that found in theatre, a practice that narrative-centric games are frequently compared to (Brooks, 2013; Wyatt, 2008, p.28; Anderson, 2000, p.xxiv;

Craft, 2007, p.210; Duncan, 2014; Murray, 1997; Innuendo Studios, 2015; Fine, 1983, p.89). Even Fine himself notes the theatrical analogy saying 'Fantasy games are similar to the theater, but with the difference that the games are improvisational. Significantly, one of the claimed benefits of these games is increased thespian skills' (1983, p.205). Indeed it seems that the characteristics that tend to make a successful referee in FRP games are closely related to those that one would expect of a competent actor (familiarity with a script (rules), imagination, role flexibility and verbal skills) but employed in a more directly social context. Since time in *Dungeons and Dragons* is not treated as real-time there is a roughness to conversation and players may often interrupt one another or pause for unnaturally long periods while thinking about how their character would respond. Interestingly these never manifest as dysnarrativa, except when jokingly scrutinised. Fine suggests 'Rather than conceiving of gaming as improvisational acting, a better metaphor might be storytelling - with each storyteller having authority over one character - producing a collective fantasy' (1983, pp.213-4). The collective nature of this fantasy is social. As the *Dungeons and Dragons 5th edition Dungeon Master's Guide* suggests to would-be referees: 'If you're lucky, the events of your campaign will echo in the memories of your players long after the final game session is concluded.' (Mearls & Crawford, 2014, p.4). Much like player stories (discussed later in the chapter), the narratives of FRP aren't characterised as such until after the play has happened at which time they are remembered fondly as stories with the pauses and interruptions forgotten.

The practical result that multiplayer games provide for this thesis is a mental model for understanding how dysnarrativa may be negotiated. Though it sounds odd to say, we should be able to agree that even in a game that has one player, *all* players should be in broad agreement with the designer, sharing something resembling a common motivation, if dysnarrativa is to be reduced.[41] This agreement between player and designer is negotiated, through a negotiation loop, by the fictional information, significant information, social information (in the case of multiplayer games_ and the degree of imaginability the game achieves (which is itself mediated by principles of imaginability). The negotiation occurs between the designer and players of the games but the information in a game's design often stands in for the absent designer. In FRP games we can see that dice rolls and role-playing are 'negotiators' in a similar sense to how the designers, players and referees are.

[41] To give an even more extreme example, a child playing games with toys imagines a fiction that is unlikely to be inconsistent since the child is both player and designer and any dysnarrativa is simply a cognitive dissonance to be self-negotiated.

Multiplayer games show how this mental model is most naturally negotiated when social information (the presence of other human players) exists to help discuss cases of dysnarrtiva. For the designers of single-player games, this negotiation must be done in advance through the embedded significant and fictional information in a game.[42]

Fiction requires effort to negotiate in fictionally explicit multiplayer games as the potential for disagreement or difference of interpretation always lingers. In single-player games this is also the case as the designer is, in a sense, a second player that has set-up a game fiction for the benefit of another player to get lost in and, hopefully, not break. Referees manage the negotiations that players have with the rules and serve as a crucial means of avoiding dysnarrativa in FRP. If this balance is not maintained then the fiction may begin to contradict established rules or rules may become so invasive into the fiction that the game may turn from role-playing to what Dormans (2006) terms 'roll-playing'. Unfortunately human referees do not exist in single-player games but negotiation does still happen in a more indirect sense and this is a key principle that designers must remember. When looked at through a lens of negotiation, dysnarrativa would seem to stand as a result of the timeless propensity for people to disagree. This examination of FRP has been useful, at least, in revealing mental models to better understand dysnarrativa. Now attention turns to those multiplayer games that resist a traditional authored narrative to see what they can bring to the discussion of dysnarrativa.

Baseball - The Prominence of Reality in Non-Authored Fictions (Player Stories)

In the 19th century, with the advent of modern sports, games began to take on a more prominent place in popular culture. The development and invention of *Association Football* (trad., 1863a), *Baseball*, *Basketball* (trad., 1891), *American Football* (trad., 1880) and *Rugby* (trad., 1863b) led to spectator sports that remain some of the most popular games on the planet. However, fiction is not integral to

[42] There are cases where players confront designers outside of the game about a fictional inconsistency which is then subsequently resolved by those designers but these are rare for various reasons. Some examples include the patching of the ending of *Mass Effect 3* (Bioware, 2012) to provide better closure in response to negative fan criticism (Goldfarb, 2012; Darklarke, 2012; Totilo, 2012) as well as infamous exchanges between Ian Bates (known by the *World of Warcraft* community as 'The Red Shirt Guy') and Blizzard developers over fictional inconsistencies in *World of Warcraft* (TheIshSites, 2010). In these cases the negotiation loop extended outside of the game to dialogue between fans and developers where these problems were later resolved.

these multiplayer games. Tomlinson (1999, p.8) argues that modern sport is nothing more than a media package to entertain audiences; it is a socialiser that no longer even requires play except by professional athletes. The games themselves contain no explicit fictional worlds, presenting highly abstract ludic achievements such as scoring runs, goals or touchdowns. Does this thesis have anything to say for competitive multiplayer games such as these? The presence of others calls to mind the prominence of reality. It is hard to enter into a fiction when you are dealing with another flesh and blood human. In the case of sports it becomes abundantly clear how out of place a fiction might be when players are physically making contact with one another or making judgments about the physical world around them in order to play. If a common motivation of fiction can be found to deal with the presence of others, how do we account for the prominence of reality in multiplayer games?

While most competitive multiplayer games are not generally rich with fiction, they do possess something of a mythic potential that leads us to scrutinise the status of stories that players themselves create that may be external to the game as a text. Lisbeth Klastrup terms these player-focused narratives 'player stories' (2008, p.143) as opposed to the embedded narratives that games independently portray. These stories are more of a player-reported record of a specific in-game event that is later narrativised. Likewise Watson (2015) has noted games, such as *Ice Hockey* (Trad., c.1880), that do not feature explicit fictions yet do still present opportunities for stories to emerge: 'Like many sports, ice hockey… generates legend, myth, history, biography, autobiography, and other forms of narrative at a furious pace. In, around, and among instances of gameplay, hockey produces dramatic situations which resolve into a variety of public and private narratives' (Watson, 2015, p.106). This intersection between reality and fiction is something characteristic to multiplayer games in which the stories of players overtakes or substitutes the fiction of a game, possessing a somewhat pseudo-fictional quality. Despite difficulties in pinning down what constitutes fictional status, Walton argues that fiction is not in opposition to reality and many games (especially multiplayer games) often blend fiction with 'reality' given that a real player is often directly narrativised or interacting with fictional entities (1990, p.102).[43] The fictional information of a game is a prop in a

[43] Philosophers have grappled for some time with the problem of whether the status of 'real' and 'fictional' are in opposition. I have attempted to avoid an ontological discussion of the nature of fiction since such discussions have an air of tangential tail-chasing about them. I have provided my definition of fictional information earlier in this thesis and I feel a discussion of the nature of reality is a tangent that distracts from the discussion of how fiction is to be understood. I do not intend to get waylaid by the quicksand of this debate as I believe it is irrelevant to my concerns. In discussing multiplayer games I wish to move the

game of make-believe - simply an imagination aid. Perhaps it is the facilitation of player stories that warrants exploration in the discussion of fiction and multiplayer games. After all, if games always operate on some plane of reality, is it possible that the stories they generate, despite being a matter of actual historical record, can be considered a type of game fiction?

Baseball would seem like an unlikely candidate for a discussion of fictional inconsistency but the presence of player stories in multiplayer games has led me to consider if those multiplayer games that have no fiction are being prematurely overlooked. Entertaining the idea of *Baseball* having a fiction or at least parts that function like fiction is, I argue, useful as it may reveal things about games we might not have considered by excluding seemingly non-fictional works. Here I would like to examine the importance of socially-shared player stories and plays that are significant to the history of a game. These examples from *Baseball* (and other multiplayer games that lack fictions) I am about to discuss are noteworthy as they reinforce principles of imaginability despite their lack of fictional worlds. While no player is likely to have ever experienced dysnarrativa while playing *Baseball*, I hypothesise that this may be because the game is successful at presenting a consistent, imaginable, socially shared 'world' much like an MMOG. If this is the case then perhaps there is something to be learnt from considering Baseball as a consistent 'fiction'.

As historically-located, narrativised gaming events, typically found in multiplayer games (although not exclusively), player stories generally live and die with the communities that play and spectate games and are not completely part of a game by themself. Player stories can be observed in various famous sporting events: great plays, unlikely outcomes or reversals of fortune. Alan Tomlinson says of Gay Talese's recollection of a Joe DiMaggio pitch: 'Sport has the capacity to do this sort

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conversation towards how we might understand the active operation of fiction in games generally. A game requires us to navigate a fictional world, the world of the game and, arguably, an additional ontological layer brought forth by the real world. That is to say my actually pressing the button in a video game is an action that simultaneously causes a fictional event to happen, a ludic move to occur and a physically real mechanical reaction. All three processes are cognitively understood simultaneously and constantly while playing a game - without dysnarrativa occurring. Kendall Walton observed that: 'Our prereflective thoughts about what links can obtain between the real world and fictional ones are strangely schizophrenic' (1990, p.191). What is meant here is that our common assumptions about reality and fiction are subject to double standards (e.g. assumptions that fiction should be like real life until it is not) that, under scrutiny, *seem* irrational but are natural with regards to how fiction actually operates. Cases of dysnarrativa arise when inconsistencies in fiction occur, not because the audience is disturbed by the ontological nature of fiction generally. This is discussed to some extent under Walton's 'silly questions' (1990. p.176).

of thing to people, to offer them unforgettably intense and meaningful moments' (1999, p.50). Players of these games become tied to these events causing a rapid mythologising that, despite technically being separate from the game, plays a big role in the appreciation of that game. While there is a risk of confusing spectatorship for narrative I believe it is worth entertaining the idea given the precedent of narrativisation of player stories and in the interest of testing the universality of the imaginability model so far. Sports and other competitive multiplayer games are not often considered in the arena of game fiction and there may be much to learn from them. Player stories are considered so integral to some multiplayer games that achieving impressive records in a sport has been suggested, not without seriousness, as a form of immortality (Guttmann, 1988, p.8). When Watson remarks that 'Hockey is a creature of narrative – it eats it and excretes it – and yet, somewhat amazingly, it does not require any kind of centralized story department or author to spin its yarns' (2015, pp.106-107) the sentiment he reflects is that games and their players automatically generate narratives not to fill a void left by the absence of fiction but because this narrativisation is part of the game. To understand ways in which video games (multiplayer or otherwise) engage with fiction it is worth a brief examination of player stories in traditional games as has been suggested by Watson (2015, p.121). One famous example from the game of *Baseball* is 'Merkle's boner'.

On the 23rd of September 1908 a play, that has since been extensively documented, was made during a game of *Baseball* between the New York Giants and the Chicago Cubs (Anderson, 2000, p.172-173). At the bottom of the ninth inning the game was tied. The New York Giants had one last chance to score a run. With Moose McCormick on third, Fred Merkle on first and two outs, the current batter (Al Bridwell) needed only to hit a single for McCormick to score the game-winning run. Bridwell did so and the game appeared to be over. As Anderson (2000) notes, it was common for fans of the era to enter and exit across the playing field and, not wanting to be mobbed by fans (angry, drunk or elated), baserunner Merkle headed back to the dugout after leaving first base. An obscure rule at the time (now prominently enforced as rule 5.08 (a)(2), rule 5.09(b)(1,2) 'comment' and rule 5.08(b) 'comment' which specifically describe hypothetical cases that mirror the Merkle game (Lepperd, 2017).[44]

[44] In *Baseball* rule 5.08 (a)(2) specified that: 'A run is not scored if the runner advances to home base during a play in which the third out is made... (2) by any runner being forced out;' (Lepperd, 2017). Rule 5.08(a)(2) was not commonly enforced until the opposing teams in

was remembered by Johnny Evers, a member, of the soon-to-lose Cubs who appealed to the umpires that because Merkle had not touched second he could still be forced out which the Cubs did attempt. The umpires (Hank O'Day and Bob Emslie) upheld the rule which drew the game to a tie. As night games were not played in this era of *Baseball*, the game did not go to extra innings. A replay was not played until October 8th that same year to resolve the tied game and decide the winner of that year's pennant race. The Cubs won that game 4-2 (Anderson, 2000, pp.173-183).

Since this play, Merkle was dubbed 'Bonehead' or 'Bonehead Merkle' in reference to the play coming to be known as a 'boner' - a foolish mistake. Merkle was stereotyped as an idiot despite being an educated man and a skilled player. He would suffer harassment for the rest of his life, both on and off the pitch, for an unfortunate mistake. Since then this story has been examined with scrutiny by sports writers and historians. Players debated the fairness of the umpire's ruling which some argue was a necessary sacrifice in order that rule 5.08(a)(2) be enforced to avoid any future disagreements. The event has since been recorded as one of baseball's most famously controversial stories and has even been immortalised in folk song (Brodsky, 2000).[45] Echoes of events similar to this can be

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Merkle's game, and a few other games in 1908, demanded the umpire enforce it (Anderson, 2000, p.180). The rule is now commonly enforced to avoid a repeat of Merkle's Boner. There are also addenda to account for events such as the runner abandoning the bases or the crowd rushing the pitch which would prevent a base-runner from touching the bases. Rule 5.09b (1) and (2) comment specifies that:

> Any runner after reaching first base who leaves the base path heading for his dugout or his position believing that there is no further play, may be declared out if the umpire judges the act of the runner to be considered abandoning his efforts to run the bases. Even though an out is called, the ball remains in play in regard to any other runner. This rule also covers the following and similar plays: Less than two out, score tied last of ninth inning, runner on first, batter hits a ball out of park for winning run, the runner on first passes second and thinking the home run automatically wins the game, cuts across diamond toward his bench as batter-runner circles bases. In this case, the base runner would be called out "for abandoning his effort to touch the next base" and batterrunner [sic] permitted to continue around bases to make his home run valid. If there are two out, home run would not count. (Lepperd, 2017)

To clarify in cases where the field is swarmed by fans (as was the case in Merkle's play) Rule 5.08(b) comment states:

> An exception will be if fans rush onto the field and physically prevent the runner from touching home plate or the batter from touching first base. In such cases, the umpires shall award the runner the base because of the obstruction by the fans.

[45] One extract from the folk song '*Bonehead Merkle*' reads:
They dubbed him "Bonehead" Merkle

heard in all sports and multiplayer games. What, if anything, does any of this have to do with fiction and dysnarrativa?

As I have said before, most competitive multiplayer games seem either not to possess a fiction or do not give it much significance. However, player stories like Merkle's give games an aspect of engagement which cannot really be said to be composed entirely of significant information (which I have defined as the information comprising the rules, goals, situations and materials of a game). Player stories are not abstract records but pseudo-narratives that enrich our understanding and enjoyment of games. While Merkle's play is not fictional (it is not pure make-believe) let us remember that under certain definitions of fiction, that privilege the role of imagination, like that of Walton's, Merkle's play and other player stories can be considered props in understanding a game's significant information through imagination. Player stories are not really fiction but they have what could be called the character of fiction about them.

Much like how multiplayer and abstract games do not *require* fiction to be played, player stories are not *required* to enjoy a game. Yet, there is a desire, a common motivation, by those that play and watch these games to generate, remember and enjoy them not only for their mythic quality but also to enhance their understanding of significant information in the game. In this way player stories function analogously to fictional information that helps communicate function and enhance the imaginability of a game. They follow the functional fiction principle, even if they are not entirely works of fiction. Player stories help us understand a game through more than purely significant information. Merkle's Boner is credited as being one of the reasons for a major rule change that still affects baseball today. Would rule 5.08(a)(2) be more understandable in raw, legalese form as it exists in the MLB rulebook or is it more helpful to imagine the Merkle game to help dramatise the rule? Watson details a similar example in *Ice Hockey*. 'Icing', a tactic that proved effective in maintaining control over the opposition but boring for spectators, led to its own rule change after it became a narrativised phenomenon: 'News reports from

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They made up Merkle words
One might "pull a Merkle"
And "to Merkle" became a verb
Some would yell "touch 2nd, Bonehead"
When he stood on first
Little kids yelled "moron"
And the older kids much worse
(Brodsky, 2000)

the period describe tedious games where one team would take a lead, then proceed to ice the puck dozens of times in an attempt to run down the clock (Klein, 2013). Finally, in 1937, responding to increasingly urgent complaints from owners, fans, and players, the league implemented Rule 81…' (Watson, 2015, p.119). As Allen Guttmann notes in his examination of the human element in baseball 'rulebooks...seldom adequately reflect the norms that regulate play' (1988, p.74) meaning that the authority of the rules is co-dependent on the actual cases where player stories cause edge cases to occur. Merkle's boner, as indirectly referenced by rules 5.08 and 5.09, negotiates the narrative of the game towards consistency with its ruleset.

Rules and player stories form a 'chicken and the egg' cycle in the formation of many competitive multiplayer games. Watson describes *Ice Hockey* 'as a kind of cybernetic loop, or set of nested loops, wherein the state of the game gives rise to narratives which in turn modify the state of the game, giving rise to new narratives, and so on, across a range of time scales' (Watson, 2015, p.117) and this confluence of the significant information and the (comparably) fictional information can again be seen in principles of the imaginability model (that fiction informs game functions and vice versa). Games present situations and situations are a part of significant information which is given proper dramatic context when fictionalised or narrativised in player stories. Watson's cybernetic feedback loop argues that in games 'narrative and situation can thus be seen to exist in a strong feedback relationship with one another' (Watson, 2015 p.121). This loop is not unlike the negotiation loop, letting the game's community negotiate stories out of the significant information of various *Baseball* games. There is some consonance between fictional and significant information in competitive multiplayer games and thus a strong degree of imaginability is arguably created by player stories. Although *Baseball* does not feature any apparent cases of dysnarrativa, it is perhaps a good example of how to achieve imaginability.

I use the case of Merkle because it is a well-known historical event but it must be said that the way in which people narrativise games is not always so exceptional or extreme. Merkle's Boner is a famous example but many mundane examples exist between friends and families who fondly remember an unlikely play or a particular player's skill or good fortune. Watson notes that 'Slumps, streaks, momentum, and myriad other kinds of "storying" are just as integral to youth hockey and adult 116 recreational leagues as they are to the NHL' (Watson, 2015, pp.116-117). Player stories can range from superstitions about clean balls to a player's tendencies to

‘jump in’ to the way a player celebrates a goal. Watson even argues that narratives can ‘take hold’ in the form of internal psychological crises such as perceiving that one is ‘having a bad night’ as a player or that one needs to ‘get their head in the game’ (Watson, 2015, p.115). Fiction and narratives are, in a sense, a part of the contest.

Player stories in games from *Super Smash Bros. Melee* (HAL Laboratory, 2001) to *Baseball* to *Street Fighter 3: Third Strike* (Capcom, 1999) to *Ice Hockey* have been noted as the core appeal of these games despite the lack of traditional narratives within these games (Innuendo Studios, 2015; Brooks, 2013; Watson, 2015; Cravens, 2014). Ian Daskin argues of *Super Smash Bros. Melee* player stories that these ‘stories feel true’ and that ‘competitive smash is built out of stories’ (Innuendo Studios, 2015). The conceits and shortcomings that lead to dysnarrativa in authored works are not present in player stories as they are partially guided by ludic systems which, by their nature, are not predictable and feature no traditional author when the game is in play. Brooks (2013) argues that we believe in player stories because they are pure distillations of chance occurrences informed by the context of play (See Fig. 4.1). Brooks claims they are *both* real-life and fiction. They are compelling for this reason but are often interpreted as fictions because they seem ‘unreal’. The stories are compelling because nobody could have predicted them, there is no author scripting the events of player stories and when read retrospectively it can be hard to remember that these are factual accounts of what happened. Many player stories avoid the conflict between the author and player that so often leads to dysnarrativa because the ‘author’ in these cases is understood as a combination of physics and fate narrativised by the community of the game after a play happens.

Figure 4.1 - Extract from *A Cartoon about Sports*. by Brooks (2013)

This idea of games being a sort of ritual space for narrativisation is not unheard of. Due to their rituals and drama Johann Huizinga (1949, p.173) argues the pomp of the courts of law, with their wigs, formalities and contests dictated by rules, are no exception (1949, p.76). Bruner (2002) reflects this observation in his own discussion of the importance of narrative in legal battles. Defendants and accusers take turns literally telling narratives that help their case (Bruner, 2002, pp.12-13). Even though the stories told in the court of law are about what factually happened Bruner emphasises the need for stories to be told a certain way to make for a persuasive case or even that narrativisation helps comprehension of a past series of events. We often colloquially talk of 'getting one's story straight' when it comes to avoiding legal punishment and the parallels are numerous between legal narratives and fictional consistency.[46] In fact, legal precedents are often invoked in the form of narratives to uphold a disputed rule, much like how Merkle's Boner is remembered when enforcing rule 5.08(a)(2) in *Baseball*. Of course, actual legal cases do not usually make for exciting reading and Bruner makes the distinction between legal narratives and what we would traditionally think of as fiction. This is important if we are to see how player stories fit into the spectrum of fiction. Legal narratives deal with the actual, banal records of events that took place which, when compared to literature (as Bruner does (2002, pp.60-61)), lack the virtual, figurative and

[46] In some legal proceedings one must be able to spot inconsistencies in a story to make judgments about a verdict which might be an interesting, if unconventional, application of techniques for reducing dysnarrativa.

speculative qualities we usually expect of fiction. Much like how rules accrue in response to player stories over time Bruner notes how legal precedents are set with respect to prior cases that are narrativised. “Insofar as the law insists on [precedents]...and insofar as ‘cases’ are narratives, the legal system imposes an orderly process of narrative accrual” (Bruner, 1991, p. 18 cited in Watson, 2015, p.119). The feedback loop of player story and game rules can be seen to be operating by principles of imaginability as fiction and function inform one another cyclically.

Player stories, on the other hand, while they are actual recorded events have more of a *character* of fiction about them which is perpetuated by their social importance. While scholars such as Eskelinen (2001) make a clear separation between abstract goals and stories, the actual cultural output of competitive game consumption does practically lead to stories that frame those ‘goals’. Players and spectators fondly remember them and they have significance for more than just the significant information at play in a given case. Their ‘reality’ is almost incidental. My arguing player stories as functionally analogous to fiction is not to downplay the historical outcomes of such events (Merkle, only 19 years old at the time, was unmercifully blamed long after the event and the play allegedly contributed to national league president Harry Pulliam’s suicide in 1909 (Anderson, 2000, p.xxiv)) but is meant to show how fiction manifests in different ways through games. Again, we can see a common motivation amongst those who engage with player stories. An additional layer of enjoyment is present in the game, taking on a quasi-fictional state through player stories. As Watson remarks: ‘a game of hockey is more than merely the robotic execution of a set of rules and procedures – it is also a dynamic psychological landscape, the topology of which is determined by the accrual of narrative over time and across multiple contexts’ (Watson, 2015, p.115). Stories in multiplayer games only live on because of the collaborative cultural preservation that surrounds multiplayer games where a common motivation for fiction is present. Even if they do not always possess compelling fictional worlds there is a common motivation for a pseudo-fictional mythology. This sets a precedent for enjoyment of multiplayer games as something other than abstract co-operation or competition. Multiplayer games avoid dysnarrativa not because they are ‘non-fiction’ but because they integrate their significant and socially-shared fictional information so closely. The lines become further blurred the more an explicit fictional world is authored within a multiplayer game.

Eve Online - The Prominence of Reality in Authored Fictions

If player stories show anything it is that the presence of others always brings to mind the odd reality of multiplayer games. This 'real' aspect is even more difficult to rectify when mapped onto an explicitly authored fictional world or 'virtual worlds'. Here I would like to discuss cases where players exist contemporaneously in persistent virtual worlds (like those of MMOGs or MUDs). Emergent player interactions naturally arise out of the tools available to players to socialise, role-play and/or disrupt the experience of other players and have been noted as a unique sociological phenomenon that both encompasses and operates outside of game fiction (Craft, 2007, pp.206-207). An MMOG that demonstrates this emergent property of multiplayer communities to an extreme degree is *Eve Online* (hereafter *Eve*). Unlike baseball, *Eve* features an explicitly depicted fictional world complete with its own fictional history, races and setting. It is not wholly competitive and rather than a strict rule-bound player limit, the game can support thousands of simultaneous players. The game takes place far in the future of the Milky Way Galaxy after expansive colonisation by mankind. Earth culture is a distant memory and now the galaxy is presided over by a number of factions, each characterised by complex networks of influence and fleets of pilotable starships. Perhaps more significantly, the emergent nature of the game means that players of *Eve* determine a lot of its contemporary fictional history.

In *Eve* players can engage in numerous roles through piloting a variety of ships. Players can take part in typical roles such as mining, exploration or combat with NPC enemies but there is also ample opportunity for piracy, market trading and factional wars each of which bleed into the real world and are primarily player-driven. One notable system of *Eve's* design is the ability of groups of players to form corporations. Corporations can focus on minor engagements such as mining and hunting NPCs but some of the largest are able to declare war on other corporations and even hold in-game territory in 'null-sec' space.[47] Groups such as these may be powerful and/or influential enough to get away with 'illegal' activities such as corporate espionage, theft, extortion and ransom that would be forbidden and regulated in most other MMOGs (Craft, 2007, p.212; Carter et. al., 2016a, p.12). These activities may lead to consequences that drastically affect players outside of

[47] *Eve* features different regions that are either policed by a non-player corporation or are not ('high-sec' and 'null-sec' respectively). Players that break fictional laws in high-sec space are likely to be destroyed by NPC security. (Carter, 2014). A more in-depth account of the roles and functions of alliances and corporations in *Eve* is given by Carter (2014, p.7)

the game (the real-world value of ships in *Eve* can surpass thousands of US dollars (Carter et. al., 2016a, p.9)) and this unique feature of the game is actively encouraged by its developers who only regulate outright hacking of the game. Social manipulation, outside of harassment and the impersonation of CCP employees, is fair game (Carter et. al., 2016a, p.13). Even at a competitive level, *Eve* features highly unusual emergent behaviour from players and deception, backstabbing and spying are common occurrences at the professional level as documented by Carter et. al (2013; 2015): 'These alliances, involving thousands of players and vying for control over vast in-game wealth, often utilize tactics such as identity deception (spying and espionage, [see 20]), unsportsmanlike metagaming (DDOSing TeamSpeak Servers, doxing and avoiding 'fair fights' [see 6]), evocative propaganda (videos, images and text) and dishonest conduct (bribes and diplomatic betrayals)' (Carter & Gibbs, 2013). The emergent and highly ruthless nature of its player-base has been well-documented by Carter et. al. (2016a). While it is clear that *Eve* is influenced by events outside of the game, the actions of players also lead to fictional histories whether the players engaged with the game intend this or not. One infamous example was a battle between several allied groups known as the 'Bloodbath of B-R5RB', the story of which has been related by those active in *Eve's* community and development (CCP Dolan, 2014; Phoena, 2014; Raimo, 2015).

B-R5RB is a solar system found in constellation Y46-EN of the Immensea region and consists of nine planets and 66 moons and can be found in the south-west quadrant of *Eve's* galaxy (CCP Dolan, 2014). B-R5RB is a fictional location which was the site of one of the largest multiplayer battles in (actual) human history. The series of events leading up to the battle requires knowledge comparable to that of an actual historical war since the battle was only one of many in an ongoing war known as 'The Halloween War'. Directly before the battle the system was used as a staging area for fleets belonging to Pandemic Legion, a multi-corporation alliance that at the time was fighting alongside N3 (N3/PL) against a coalition comprising of the CFC Alliance and a collection of predominantly Russian and Eastern-European forces commonly referred to as RUS (together CFC/RUS). In *Eve*, sovereignty can be held over a system as long as a corporation pays a monthly fee with in-game currency. On January 27th 2014, the corporation in charge of the sovereignty transfer, 'H A V O C', missed a payment due to human error. Suddenly the ownership of the system was up for grabs and, with B-R5RB being a key strategic nexus for the deployment of Pandemic Legion ships, CFC/RUS quickly moved to

gain control of the system. A strategic advantage of this ambush was that the loss of control happened on a Monday workday, making assembly of a defensive force difficult. Despite efforts to regain control of the system by N3/PL, CFC/RUS quickly gained a foothold in the system. As CCP Dolan (2014) notes, up until this point conflicts involving large numbers of ships, including strategically powerful Titans, typically resulted in a one-sided victory. In the case of the battle for B-R5RB both sides felt confident in their ability to defeat the other. This led to a large protracted battle that lasted 21 hours across multiple timezones (7548 player-characters worldwide were involved in the fight) and resulted in the loss of hundreds of player ships including 75 Titans. The estimated cost of the losses is estimated to be 11,000,000,000,000 ISK (worth between $300,000-$330,000 USD (See Fig. 4.2)) and ultimately resulted in the loss of N3/PL's control of the system to CFC/RUS as well as further material losses during an attempted retreat. The battle had a knock-on effect during the fight to prevent reinforcements on both sides deploying to the area but there was also a massive change to spheres of influence in the entire game-world which has shaped the history of the game since (CCP Dolan, 2014; Raimo, 2015).

After the battle was finished player-run trade markets raised prices (real and virtual) on construction materials in anticipation of a greater need for production and the players that forgot to pay B-R5RB's sovereignty payment are, in a sense, responsible for hundreds of thousands of dollars worth of losses. If the battle had taken place on a Saturday instead of a Monday would the outcome have been different? The motivation for the battle is not strictly based in *Eve's* fictional universe but rather a drama played out by its players that necessarily factors in real world concerns. Again, there is a tension between authored fiction in *Eve* and the collective player story. The Bloodbath of B-R5RB has the same pseudo-fictional nature as Merkle's boner but with the addition of an explicitly authored fictional world that happens to be attached, almost incidentally.

Figure 4.2 - Infographic displaying information about the Bloodbath of B-R5RB by Elena Molkan (2015)

In commemoration of the event, the developer of *Eve*, CCP Games, erected a monument called ‘Titanomachy’ in the B-R5RB system (CCP Dolan, 2014). The Titanomachy is a purely fictional object consisting of dramatically arranged Titan wrecks implied to be an aftermath of the battle. CCP Games have archived some of *Eve’s* more spectacular player stories in a collection of narrativisations known as ‘True Stories’ (Carter, 2014, p.26; Carter et. al., 2016a, p.16). These stories have even been fictionalised as comics (Sunu, 2014) showing that CCP Games values these fictions as much as it does their own authored fiction. This raises the question of the authoritative version of player stories. The truth of some player stories can be disputed and there is disagreement over the details of events like Merkle’s Boner. *Eve* also suffers from politicised interpretations or hearsay and rumour. *Eve* cannot really be said to be totally ‘real’ because the record of these stories is lost in subjective narrativisation. In this way the history of *Eve* mimics actual human history which is also vulnerable to subjectivity and embellishment (Carter et. al., 2016a, pp.16-18).

The ‘reality’ of *Eve* seems incidental despite players repeating phrases such as ‘Eve is real’ used by *Eve’s* developers and community to signal what is perceived as unique about *Eve* (Carter et. al., 2016a, p.6). This sentiment is countered within the *Eve* community by similar mottos such as ‘internet spaceships are serious business’, implying that *Eve* is, at the end of the day, just a game (Carter et. al.,

2016a, p.27). *Eve's* player stories are not destroyed by the prominence of reality but are in fact given greater strength because of them. These stories are still not 'real' in the sense that they are enacted in a virtual space but their retelling and narrativisation by the community and CCP Games makes for incredibly compelling fiction with the added allure that one can also participate in *Eve's* world. Like Baseball, the primary draw is being embedded in a socially shared narrative that involves spectacular game events like the Bloodbath of B-R5RB that can either be integrated into the authored fiction or comfortably stand apart from it.

The question of who is the author of *Eve's* fiction is interesting to bring up considering that most multiplayer games generally do not feature a focus on fiction and there is an imbalance when it comes to the focus of interest in the game. The developers of the game commemorated an event that is remembered more for the actual impact the battle had on the player's story than it is for changing *Eve's* fictional universe. PVE (player versus enemy) play, in *Eve*, is often subservient to PVP (player versus player) play as it can shut down key areas for PVE miners and traders and CCP Games have been criticised as favouring PVP interactions over the desires of PVE players (Carter et. al., 2016a, p.25). Indeed almost all of *Eve's* most spectacular stories are to do with players interacting with one another rather than the fictional world of *Eve* which is often superceded by player stories. One could say that *Eve's* dystopian take on hyper-capitalist expansion of space informs the ruthless, propagandised social games that players engage in. However, this interpretation doesn't change the fact that the prominence of reality still plays a part in the fiction and rather than causing dysnarrativa it shifts the focus of the game to the unique affordances that the presence of others provides for engaging with fiction.

I have argued that player stories seem to serve as a method for players to engage with a game, either for learning the game or fondly remembering moments, that tugs at a common motivation for the narrativisation of game events. Fine (1983, p.139) notes that players of fantasy role-playing games establish a group history with their play which they may refer back to either for pleasure or to reaffirm their place in a group. This is common for many multiplayer communities. Stories in the fighting game community tend to follow this same role such as the legendary 'Evo Moment 37' (Cravens, 2014) even though they are not explicitly fantasy or fictional. Some of the leading participants of the B-R5RB conflict explain, in interview, that they aren't seriously bloodthirsty, nor are they emotionally destroyed by such a loss. They are

just glad to have participated in such a massive and personally significant event (Phoena, 2014).

When I push a button that fires my weapon in a game and a fictional person dies how do we talk about such an occurrence? Pressing a button is not a fictional act but somewhere along the way it has a fictional consequence. There is a sort of doublespeak at play when we talk about games. In a single-player game, such as *Super Mario Bros.* (Nintendo Research and Development 4, 1985) it would not be unusual to talk about the player's character, Mario, having done something whilst in another instance suggesting that the player themself did it. At any point we will either be relating significant information (the player did something) or fictional information (Mario did something). In multiplayer games we very rarely refer to our fictional character except as shorthand or to explain something. For instance, during a match of *Team Fortress 2* a player may mention to a teammate that 'scouts are entering the base'. Fictionally this does indeed happen but it is meant only with significant implications. The implied subtext is that the scouts need to be killed so that we do not risk losing the game. During commentating of a game such as *Street Fighter 5* a fictional character might only be referred to for the sake of discussing their stats. Saying something like 'Mika [player character] was really strong in season one' or 'Daigo [player] is the strongest Ryu [player character] player' refers to a fictional character but is not developing a fiction. Fictional information becomes shorthand for engaging with the significant information and thus the reality of the game.

From this examination of player stories in the context of virtual worlds and competitive multiplayer games we can see that player stories fulfill a similar function to fiction as described by the functional fiction principle in Chapter 3 joining the reality of the games with their fictional components to increase understanding and enjoyment of the game. In cases where an 'author' of fiction is absent, as in *Baseball*, players and the game's community appears to step in to fill in an otherwise purely abstract game with meaningful narrative content that naturally abides by certain principles of imaginability. The same can be seen to happen even within explicitly authored fictional universes such as *Eve's* the presence of others and the prominence of reality leads to player stories taking on more importance. It should also be noted that this narrativisation only occurs when the common motivation for that fiction exists between players. Otherwise dysnarrativa can not realistically happen where the primary common motivation is competition or socialising since fiction is not as much of a concern. The fact that others are present

or that the real world intrudes into these games is not quite as detrimental to multiplayer fictions as we would assume. Reality actually gives strength to player stories and our sharing the experience with others can be intensely attractive as a unique means to experience a fictional world.

Conclusion

George Will is quite correct when he says that not all games are created equal (1990, p.294). It is quite difficult to reconcile the pluriformity of such a vast medium, especially when discussing how fiction operates across all cases. Multiplayer games and abstract games are particularly difficult given their unique qualities and this chapter may have stretched the already broad notion of fiction I have been using up until now. This is partially due to my taking on an approach that hoped to be applicable to all games so as to avoid a narrowly contemporary focus but I realise that this could use refining. Still, there are useful lessons to be learnt from this temporary broadening of perspective.

From examining multiplayer games it can be seen that they back up some of the principles of imaginability. While they do not always feature fictions that we would associate with more narrative-focused games they do seem to operate consistently with the principles established by this thesis. From multiplayer games I have noted that a common motivation generally guides play and that the presence of others is not a problem as long as the players acknowledge a common motivation. This common motivation does not necessarily need to *motivate* all who are playing but it is usually acknowledged by all who play. In multiplayer games where the common motivation is not for the purpose of engaging with fiction (for instance, competitive play) player stories may manifest as a way to understand and fondly narrativise significant information. The common motivation abides by the framing principle (specifically through integration) as it defines the themed context (in certain cases it prescribes a frame of 'fiction' that signifies to players that they are collectively engaging to pretend a fiction together) in which significant information is to be understood in a multiplayer game and therefore aids imaginability. Player stories, such as those found in *Baseball* and *Eve,* abide by the functional fiction principle since they help understand game functions as (narratives functionally analogous to) fictional events i.e. imagined narratives with real lessons concerning significant information. The significant information of a game is also what imbues the 'fiction' of player stories with lasting importance and reinforces the pleasure of knowing the

game outside of a purely abstract context. The functional relationship player stories provide therefore aids imaginability.

Probing further into FRP games it was proposed that multiplayer games, by virtue of the presence of other players, perhaps include another set of information termed social information. Social information is joined to fictional and significant information by common motivations in groups of people. Because the presence of others is a factor in multiplayer, other players bring in information which is not wholly significant or fictional but rather social. This might help explain the pseudo-fictional nature of player stories that bridges bridges the gap between virtual fiction and real significant information. While player stories are narrativised as if they were fictional player stories also carry real social meaning and impact that also informs players of the 'real' rules of the game.

Finally, multiplayer games that focus on the development and enjoyment of fictional worlds show a useful mental model for thinking about how to actively reduce dysnarrativa. *Dungeons and Dragons* and similar FRP games involve negotiation and have helped to define a negotiation loop that exists between all the parties involved in a game (designers, players, information and referees). These parties, through a cycle of stating and agreeing, will negotiate the fictional world via fictional, significant and social information. To avoid dysnarrativa the negotiation loop must constantly cycle between the parties as they agree or after disagreements are resolved. If disagreements are not resolved then the loop stops and dysnarrativa will occur. For now I believe it is a useful mental model for understanding the process for reducing dysnarrativa.

Conclusion: How can Fictional Inconsistency in Games be Reduced?

This thesis has reached several conclusions summarised below. In the first chapter a concrete definition of dysnarrativa was established as the subjective phenomenological experience, by an audience, that a fictional world feels inconsistent in an aesthetically defective way. More specifically ludic dysnarrativa describes dysnarrativa that occurs for the fictional world of a game. Along with this several branches of ludic dysnarrativa were categorised as general causes of dysnarrativa in games. Later, in Chapter 3 part 2, another branch was defined and so the five branches are as follows:

1. Authorial Struggle: Where the player meets the designer. Player agency subverting the designer's intent or the designer not accounting for player subversion

2. Structural Dysnarrativa: Failing to account, fictionally, for the presence of repetition and failure in the structure of games

3. Dysnarrativa by Proxy: Material problems resulting from cheating, glitches or other problems with the legality and technology that props up a game

4. Dysnarrativa as Device: dysnarrativa used as a literary device in the aid of theming fictions in which inconsistency is a desirable aesthetic effect; usually in the genres of comedy or horror

5. Comprehensiveness: The more fictionally comprehensive a work becomes the more likely it is that the work will contradict or disrupt itself and cause dysnarrativa.

It was identified that the common element to the many cases of dysnarrativa, despite having different causes, was that information in a game was understood in a way that did not help a continuous experience of that game's fiction. In short, gaps in information were called to the player's attention. From an examination of similar phenomena in other media in chapter 2, it was theorised that information in various media is composed of medium-specific 'significant' information and fictional information about the fictional world of a work. The way in which these two sets of information are collectively understood is important with regards to whether or not dysnarrativa is felt. Thus, I proposed a model whereby imaginative connections are forged between the two information sets to create a third type of information in the

imagination of the audience - ‘imagined information’. The property of a work that affects the likelihood of creating imagined information was termed ‘imaginability’ which is defined as the quality of being imaginable. Imaginability is also characterised as operating opposite to dysnarrativa. Where dysnarrativa calls attention to gaps in information, imaginability works to divert attention from them or to patch them. This imaginability model was visualised in Figure 2.15.

Having pinned down a hypothetical model of how imaginability might help reduce dysnarrativa I sought to examine various case studies to refine specific principles of imaginability so that it could be repeated in future designs. The refined principles of imaginability are as follows:

Framing Principle - A stable frame aids imaginability by focusing attention on relevant information to be imaginatively joined and away from irrelevant information that would constitute minor cases of dysnarrativa. A frame is created either by:

Integration: By providing a thematic context for the significant information in a game. Create a fictional world in which structural qualities of games (commonly repetition and death) are fictionally integrated. This helps adjust expectations of players going in.

or

Dissolution: By the abstraction of fictional information in a game. Create a fictional world in which fictional information is thematically constructed around significant information. (This is naturally very easy to do for abstract games).

or

Both

Functional Fiction Principle - Imaginability is functional. Imaginability’s goal is not to improve the quality of fictional information. Rather, it allows functional principles of significant information to be intuitively understood via the game’s fiction and vice versa. Function tells fiction and fiction tells function. Because significant information tends towards a constant of ludic abstraction, one can treat this like a mathematical constant when considering how to conceptually or visually represent a game. A game’s fictional information must account for this to some extent so that the gap between them is not too large. This often restricts the fiction and representational style of a game to simpler, more abstracted forms but

it does not necessarily mean that this has to be the case. Contradictions are made obvious by functional relationships between fictional and significant information and so emphasising a functional relationship between fictional and significant information also tends to reduce contradictions by easily bringing them to attention so that they can be identified early in development.

Sweetspot Principle - There is a spectrum of imaginability. In other words imaginability can be achieved but to differing degrees of success. It has already been established that a low degree of imaginability means that dysnarrativa is likely. The Comprehensiveness branch indicates that imaginability is not meant (or able) to be completely comprehensive and that certain degrees of imaginability are not useful but neither is a lack of imaginability. Thus a 'sweetspot of imaginability' exists where a game is neither too comprehensive nor too disconnected. Imaginability is at its strongest in this sweetspot but this sweetspot is different for every game due to the relative complexity of each game. More complex games provide wiggle room for relatively comprehensive fictions while less complex games benefit from relatively abstract fictions to the point that abstract games are almost invulnerable to dysnarrativa.

Separation principle - To avoid the negative effects of dysnarrativa, frame a game around comedy, satire and/or horror, and/or emphasise dysnarrativa by employing the three branches of dysnarrativa. Paradoxically this will cause imaginability but on a metatextual level.

These principles help determine some means of reducing dysnarrativa but do not form a comprehensive panacea for the problem. Because this thesis has taken such a broad approach to games it is thought that the findings should apply to most cases of games. In Chapter 4 the conclusions so far were tested against cases of multiplayer games which introduce the presence of others and therefore feature a greater prominence of reality in the mind of the player. These two features are thought to be risks that may disrupt the enjoyment of a fictional world. From the discussion it can be seen that as long as a common motivation amongst players to enjoy a fiction that these aren't necessarily obstacles. Multiplayer game fictions can be enjoyed in certain cases with very little dysnarrativa but this requires vigilant negotiation of information within a game. Players, designers, referees and game information can all be seen as parties involved in a negotiation which has the common motivation of maintaining fictional consistency. This 'negotiation loop', as I termed it, can also apply to singleplayer

games even though only one person is involved in the negotiation with an absent designer and the game's information. The presence of other people within multiplayer games was theorised to create another type of information, social information, which must also be negotiated alongside other information types. From examining multiplayer games it can also be said that the prominence of reality within them tends to make player stories pseudo-fictional and that these stories can operate by the functional fiction principle of imaginability. Player stories enrich players' enjoyment and understanding of abstract game rules by associating them with memorable player stories.

The conclusions reached by this thesis are by no means a comprehensive conclusion to the discussion of dysnarrativa and the potential directions of future research are indicated below.

Critical Reflections

Having gathered the conclusions of this thesis I would like to reflect on decisions made during the development of this thesis. Written over several years, the ways in which this thesis was researched, written and conceived have changed drastically which has also led to changes in how I have retrospectively assessed the work.

Other chapters were planned but discontinued for various reasons. I had planned to do a chapter on the problem of subjectivity and dysnarrativa but this warrants a separate thesis altogether and as I began to write it it became clear that data would be the best way to determine the impact of subjectivity on dysnarrativa. Since this thesis is concerned with a qualitative analysis of the phenomenon it was too late to begin introducing a quantitative method of collecting data for just one chapter. Another subject I thought should be covered was going to look at the history of games and how fictional consistency might be valued in different historical and cultural contexts. While not invaluable this chapter was discontinued for being too large a task to be relegated to just one chapter. An in-depth discussion of current technologies such as VR was also not possible and, again, warrants its own focused study where there is more time to explore the topic. I wanted to discuss the concept of apophenia in relation to how the mind makes imaginative connections but, while a very interesting discussion, this ended up being too much of a tangent that didn't result in any useful conclusions for the thesis.

A goal I had for this thesis was to avoid relying on or coining too much jargon. While I have taken every effort not to invent new words I have had to define a number of original terms using pre-existing words. This has led some sections of the thesis to perhaps end up difficult to read without the glossary to hand but I believe I have avoided a glut of jargon. A regret that could never be put right is the inability to examine more cases of games that have more unique approaches to fiction. I have tried to be broad by looking at rhythm games, fighting games, traditional sports, MMOGs, FRP games, abstract puzzle games, and other atypically discussed game types but the broad range of forms that games take is a frustrating but inevitable limitation of this thesis. I still believe this approach was beneficial for the thesis since a universal approach serves more than just the development of video games. Video games are typically given a lot of focus in game studies but this only serves to restrict perspective on problems such as dysnarrativa and it is worth considering how the findings of research into video games might affect other types of games.

My initial assumptions about the problem of dysnarrativa have changed a lot. I naively assumed that a comprehensive solution to the problem of dysnarrativa existed but the problem is highly complex. This is why I emphasise the notion of 'reducing' dysnarrativa rather than eliminating it all together as I believe this is impossible. There are some cases where significant information is simply a quirk of the medium that cannot always be naturally fictionalised. This same idea is reflected by Dyer's idea of musicals existing in separated, integrated and dissolved categories. This model is just as much a way of excusing metatextual elements as it is an effort to understand them. Still, I find the issue of fiction in games still interests me and there is ample room for the research to expand.

Future Research

This thesis focuses on a qualitative analysis of the means to reduce dysnarrativa in games. Having reached the conclusion there are many paths I can see the research taking from here.

Subjectivity Data

One major issue that should be addressed is the extent to which dysnarrativa is a subjective concern and whether it only affects a minority of players. I have said that it is unusually common to experience dysnarrativa when playing games but almost no data exists to support its prevalence other than the ubiquity of its discussion

amongst scholars, journalists and designers. Is it simply a matter of opinion or is it a design obstacle that a developers can reasonably be asked to prioritise? This is important to address if one were to make the case to developers that an imaginability supervisor would be useful since it may not pay off financially to address issues of dysnarrativa. Indeed some of the most financially successful games of all time (even those with a focus on narrative) can suffer dysnarrativa prominently. Not only is dysnarrativa subjectively felt but there are several dimensions to this subjectivity. The judgment of whether a fiction is consistent or not is determined by several factors that should be examined in greater detail: player skill, game literacy, personal taste, culturally-informed values, awareness of the logistical demands on the creator and the degree to which they [the player] are interested in game fictions.

Hard data would go some way to outlining the scope of dysnarrativa as a problem as well as helping locate it within specific demographics. Surveys of players would help reveal how many value fictional consistency and within which types of games. I would hypothesise that the amount of players that value fictional consistency is likely to have an unequal distribution in a given sample set given that there are many other parts of a game that can be enjoyed independently of fiction. The benefit of doing this research would give some conclusive results on what types of games are likely to have an audience that values fictional consistency and whether or not their own game is causing seriously disruptive cases of dysnarrativa. Perhaps certain types of gamers are more sensitive to dysnarrativa than others, whether this be a difference in skill, genre preference or cultural background. Gathering data on the problem would help answer a lot of lingering questions. I would argue that imaginability is good for an audience unfamiliar with many game conceits who are less likely to tolerate the learning of purely abstract systems and so efforts to incorporate fictional consistency as a criteria in testing usability are worth exploring.

One case study I would have liked to pursue is the cultural differences between the countries where gaming is most prevalent. China, the United States, Japan, Germany and the United Kingdom have very different cultural values and it would be interesting to see how each values fictional consistency and coherence. Japanese games, like much other popular media from the region, tend to feature dramatic swings in tone as well as quick switches between highly abstract and realistic representational styles when compared to the general trends of games released in the west. It’s possible that some aspects of consistency are intersubjectively understood. Some issues might transcend culturally informed ideas

of consistency. There are precedents that suggest intersubjectivity and universal grammar in media such as film (Prince, 1993) and a linguistic approach to dysnarrativa (and game fictions generally) would be a fascinating study to determine whether or not it is a cross-cultural phenomenon. There is evidence that suggests that film literacy is somewhat universal but more medium-specific or complex operations are not easily intuited by young children and similar studies on games would be invaluable (Prince, 1993, p.24).

Specific Cases of Dysnarrativa

The recent emergence of 'Virtual Reality' (hereafter referred to as VR) headsets pointing towards a market for immersive singleplayer experiences raises questions of how one's understanding of fiction is changed by the apparatus that player's use to interact with the fictional world. However, an early design problem encountered by VR software designers is how to implement the social element in a VR space (Schell, 2016). Augmented Reality (AR) and Mixed Reality (MR) are other alternatives whereby computer generated images are projected over real-time footage of the real world or into the real world itself via stereoscopy or holographic technology. But, like sports, AR experiences would not so much immerse a player into a fictional world rather than add to the world they already exist within. Games like *Pokemon Go* (Niantic, 2016) seek to join the real world with the game and thus fictional consistency is not a primary concern. In cases of VR, MR and AR the discussion of dysnarrativa would shift from a question of fictional consistency to a question of how seamless the illusion of presence would be. Nevertheless, new media warrant a more specific focus of study with regards to how they depict fictional worlds.

The broad approach this thesis takes means that other specific details of certain subsets of games may go overlooked. Studies of dysnarrativa as they relate specifically to game subsets (such as video games or board games) or game genres (first-person shooter, third-person platformer) may reveal uniquely specific aspects of dysnarrativa not covered by a broader study. This thesis does attempt an analysis of multiplayer games but more specific research is needed. Going deeper there may be even more specific cases to examine such as how to fictionalise specific game mechanics, archetypal roles or level designs. The work done so far is also potentially useful to the discussion of dysnarrativa as it exists in media other than games. The idea of medium-specific 'significant' information clashing with fictional information in particular may be most useful. Transmedial dysnarrativa may

also be a problem for fictions that are being told through multiple media and so adaptation is potentially another area to explore for dysnarrativa given that the fictional information is the same but the significant information will not be.

Social Information

In the discussion of multiplayer games I briefly mentioned the idea of another type of information, 'social information', as also interacting with fictional and significant information. In cases where fictional information appears to be absent I hypothesise that social information holds the torch of fictional information and that social and significant information likely operate along similar principles. While there are many sociological studies of sports and games it would be worth looking at how the social engagement with sports might structurally mirror how game fictions are understood in the context of play.

The Imaginability Supervisor

In the film industry, the hectic pace of production necessitates a role known as a script supervisor (also known as a continuity supervisor). The script supervisor's job is to make notes during filming of the position and situation of various pieces of equipment and anything within the frame of the camera. This is so that during shooting and editing the various scenes and cuts can be created and read easily by both the production staff and the audience. Rowlands describes the job thus: 'The role of continuity ensures that when the finished material is assembled and finally shown it will flow in chronological order in a smooth way, and that continuity is preserved in action, sound, costume and props within each scene and from one scene to another' (Rowlands, 2000, p.10). My proposal is that a similar role could be introduced into game development for the sake of maintaining imaginability and thus fictional consistency. Although a script supervisor maintains a slightly different kind of continuity than what I am proposing (script supervisors do not need to point out fictional inconsistencies only discrepancies between shots) it is interesting to consider whether such a role would help or if an existing developer role should fold this into their responsibilities.

Within game development there are many discreet specialised roles that are tasked with communicating clearly to one another with the goal of creating a specific experience for the player. There is a reason why script supervisors are a dedicated role and not something other people can collectively account for during production. Continuity is about all parts working together, if the role was

designated to a crew member with another specialist role they would likely be distracted by their specialist concern (Rowlands, 2000, p.70). For example a costume designer could look for continuity in a scene but is likely to focus only on the continuity of clothes between scenes. A dedicated script supervisor allows for other roles to not worry about these details. Specialist roles will also be occupied with specific parts of development and will not be present for the entire development of a project. A script supervisor is able to be present for the entire shooting. It sounds intuitive to suggest it being a team effort but assigning one person the role allows for trust in someone whose only job it is to maintain continuity and consistency. This gives them a sort of objectivity you would not find in a group looking for inconsistencies as disagreement would not have a final arbitrator. Instead you will be left with compromises.

Obviously the production of games and films have very different concerns but it is interesting that a role to ensure that continuity is maintained has emerged within film production. Script supervisors work in real time and must have consistently good observation skills (Rowlands, 2000, p.68). Games do not suffer the constraints of ‘shooting on location’ or in ‘real time’ and have more emergent properties that won’t be obvious during development. Yet, the parallel is worth considering. Perhaps only large teams could financially reap the benefits of such a role but a consultant imaginability supervisor might be a workable agent within game development. The exact title for the person in charge of the fiction or narrative in a game, frustratingly, varies a lot from developer to developer which shows how the development of games is still neotenous and unformed. One might think that such a role might be too subjective to take on but it is worth remembering the intensely fierce debates that surround game balance which is similarly subjective but still requires that specialists at least attempt to maintain balance within a game (Street, 2017).

Obstacles in Game Development

As I suggested above, the idea of an imaginability supervisor being introduced into a game’s development may be a worthwhile concept to explore. One gap in the research of this thesis is doing field research into the common logistical problems that lead games to suffer from dysnarrativa. The people that develop and make games are intelligent and reasonable and so dysnarrativa is not some alien problem too them. For this reason it might be worth a close examination of the specific reasons why dysnarrativa is not prioritised or fixed in prominent cases. The

financial, market and temporal constraints on developers obviously play a part and not every game privileges its fictional world as a core concern but it is worth investigating in-depth the practical problems that occur in development that prevent the reduction of dysnarrativa. Also of value would be to test the principles in the conclusion of this thesis to see if they would practically reduce dysnarrativa and where they could be improved or amended for the practical concerns of game development.

Answering Druckmann

In my introduction I stated that the conclusions this thesis reached might help improve the dysnarrativa Druckmann insists is not a problem in *Uncharted 4*. Here I would like to do just that and demonstrate what this thesis has concluded. The dysnarrativa in *Uncharted 4* is caused by two branches of dysnarrativa. Firstly the structural dysnarrativa branch shows that the game fails to account for the fictional repetition of death in Uncharted. It is not so much that multiple people are killed by our otherwise likeable protagonist but that the repetition eventually makes the number so high that we are more likely to question the plausibility of it being so high without this being remarked upon by the characters in the game. In other words *Uncharted 4* does not fictionally account for the excessive repetition present in the game. Secondly, the game suffers from the designer not accounting for player agency. If a player identifies the dysnarrativa inherent in killing so many people and wishes to dispatch enemies non-lethally, avoid them altogether or role-play Drake as a character more appropriately framed as a killer then they are unable to. Thus the designer is assigned most of the authority in the game's fiction and thus the excessive killing is non-negotiable. The negotiation loop in this case stops.

To resolve its own dysnarrativa, the *Uncharted* games could better frame the fiction as it relates to the game. Through integration, the game could characterise its protagonist as one willing or forced to kill on a regular basis. This could involve giving Drake a mercenary background or give greater context to the self-defense argument. Although a radical change, the game could maintain Drake's character but frame the killing as a choice and provide the player with less enemy encounters or a greater variety of non-lethal options. Functional relationships between the fictional and significant information are not currently being maintained due to the unusually high number of people we are asked to kill. To maintain a functional relationship between the fiction and significant information the game could reduce enemy encounters by decreasing the game's total length (thereby reducing the

repetition and high number of encounters) or have the player just encounter less enemies per encounter. This might reduce a core component of the challenge of *Uncharted 4* but then the need to include areas of the game where the player must dispatch enemies is perhaps questionable in certain fictional contexts. Again, non-lethal means might be a way to keep the number of encounters the same while maintaining Drake's character. Changing the representational style of *Uncharted 4* towards a more representationally abstract style might also help accept the regularity of death within the game by helping depersonalise our enemies. The pseudo-realistic style the game currently uses may prime players to expect other questions the game confronts us with as adhering to a subjective sense of realism.

The *Uncharted* games arguably paint Drake as unconcerned with the number of people he has killed and thus he can come across as psychopathic despite and because of the frequency of quips he makes while killing people. To reduce dysnarrativa either *Uncharted* needs to reduce the number of enemies to be killed, allow for a non-lethal means of taking out enemies or better represent or contextualise Drake's response to his killing. Any of the suggested improvements are likely to transform the game (possibly drastically) but they will improve the game's fictional consistency. The dysnarrativa caused by the number of men Drake kills leads the game to feel separated rather than integrated or dissolved. The only other option I have not mentioned is to have the killing framed humorously or horrifically as a way to escape having to discuss these troubling inconsistencies. *Uncharted 4* ironically does this by naming the in-game trophy/achievement for killing 1,000 enemies 'Ludonarrative Dissonance' rather than attempting to better integrate the game's fictional and significant information.

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Glossary

Common Motivation - A motivation that brings people together to play multiplayer games that is either commonly held by all players or commonly agreed to be the motivation for playing.

Constant of Ludic Abstraction - Because significant information is inherently ludically abstract, one can almost treat this as a mathematical constant when considering how to conceptually or visually represent a game. Therefore significant information is a constant limitation to the complexity of fictional information. A game's fictional information must account for this constant of ludic abstraction so that the gap between types of information is not too large. This often restricts the fiction and representational style of a game to simpler, more abstracted forms but it does not necessarily mean that this has to be the case. This principle is demonstrated by the fact that most abstract games almost never cause dysnarrativa since ludic and representational abstraction are often in harmony in these cases.

Dysnarrativa - Dysnarrativa is the subjective phenomenological experience, by an audience, that a fictional world feels inconsistent in an aesthetically defective way. (Ludic Dysnarrativa describes dysnarrativa that occurs for the fictional world of a game).

Fictional Information - Information that pertains *only* to the fictional world of a work.

Imaginability - The quality of being imaginable. A quality that helps avoid the gaps caused by dysnarrativa.

Imagined Information - Information formed from a blend of fictional and significant information in the player's imagination.

Negotiation Loop - A cycle of negotiation between the parties involved in the play of a game (players, referees, designers and game information) with the goal of creating a consistent experience for the players. Metaphorically it can be understood as the parties involved making statements about information in the game and then negotiating with the other parties so that they are in agreement on these statements.

Significant Information - Significant information is information that relates only medium-specific meaning that is not otherwise fictional. In a game, it consists of the rules, goals, situations and materials for the playing of a game.

Thank you for reading!