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Approaches to Game Fiction Derived from Musicals and Pornography

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Abstract: This paper discusses the construction of consistent fictions in games using relevant theory drawn from discussions of musicals and pornography in opposition to media that are traditionally associated with fiction and used to discuss games (film, theatre, literature etc.). Game developer John Carmack's famous quip that stories in games are like stories in pornography—optional—is the impetus for a discussion of the role and function of fiction in games. This paper aims to kick-start an informed approach to constructing and understanding consistent fictions in games. Case studies from games, musicals, and pornography are cross-examined to identify what is common to each practice with regards to their fictions (or lack thereof) and how they might inform the analysis of games going forward. To this end the terms 'integrated', 'separated', and 'dissolved' are borrowed from Dyer's work on musicals, which was later employed by Linda Williams to discusses pornographic fictions. A framework is laid out by which games (and other media) can be understood as a mix of different types of information and how the arrangement of this information in a given work might classify it under Dyer's terms and help us understand the ways in which a game fiction is considered consistent or not.

Keywords: games; video games; game fiction; game narrative; game storytelling; pornography; musicals; ludonarrative dissonance

1. Introduction

This paper sets out to establish the common links between humanities theories applied to musicals, pornography, and games and to identify the ways in which game fictions can be understood to be constructed around the formal aspects of games. This research is particularly concerned with cases where fictional consistency might be more reliably achieved in a game. This research was undertaken using a humanities approach because understanding fiction in musicals and pornography in relation to the structure of games and the experience of fiction by players is not an empirical problem with a quantifiable answer. Many have identified gaps between the fictions and rules-oriented qualities of games (Polansky 2015; Tocci 2008; Juul 2005; Hocking 2007; Murray 1997) and the understanding of these gaps is a prime concern here. Often neglected are those media which, I will argue, have structural similarities to games and thus could reveal much about how they operate alongside fiction. 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. Fictional inconsistencies are 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 practices, musicals and pornography, stand out alongside games where fiction is often challenged by the formal affordances

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of their media. Like games, these practices are not primarily associated with telling stories and even challenge traditional notions of fictional representation.

2. Musicals and Pornography

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—in particular, musicals and pornography 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, musicals 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 musicals 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, p. 120). 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 that I argue is one of many. The formal core of each is related to the sensory pleasures of sound, sexual arousal, and victory rather than storytelling. 1

To make sure there is no confusion at this stage, I define music as organized sound chosen for performance (prerecorded or otherwise) and musical theatre and film (hereafter referred to as musicals) as productions that use music as a foundation for exploring a narrative or theme. My definition of musicals does not presently include opera, as Taylor (2012) notes the two are very distinct forms and so the theoretical discussions of musicals presented here are not necessarily applicable to opera. 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 nor exclude the possibility of fictional information in music or pornography (yet in practice they very often exclude it). I realize these definitions are quite broad and I will discuss many cases that function in different ways. A pornographic pin-up functions differently to a pornographic film or erotic literature but all examples will come under my definition of pornography. My discussion of musicals is similarly broad as I will primarily be discussing examples from musical theatre but also of classical compositions and popular musical genres. These extra examples, even though they are music, do not strictly fall in the same realm as musicals. However, this diverse range of case studies still provide useful comparisons to the ways fiction functions in games. Games, musicals and pornography are all practices that are not tied to a particular medium and so caution is raised here not to confuse my discussion in this section as making definitive claims about any of the media these practices use. They are only discussed to

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 musicals and of pornography. Oliver Sacks, in his study of the cognition of music, emphasiszs 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, p. 47)

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 repeat actions in order to achieve a preferred performance or a kind of virtuosity' (Dovey and Kennedy 2006, p. 100).

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help understand how fictions function in cases similar to games (where fiction is not strictly necessary or of primary focus).

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 that 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 and ludically compelling 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 1980) the plot centers on 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 subgenre of porn parodies (Simon 2003) and the hardcore feature films that Williams (1999) examines are seen as exceptions to the norm when compared to more 'gonzo' films or nonfictional 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' (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. Ménage à trois
- 6. Orgies
- 7. Anal sex
- 8. S&M (Sadism and Masochism)

While this is not 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 musicals, fiction is communicated alongside formal musical information. Typically, a distinction can be made between music and lyrics, and in the case of musicals 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*—(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

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to 'absolute music' which is purely abstract, nonrepresentational 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 (as can be seen in bar 130 of *VI Symphonie F Major "Pastorale" Op.68*. by Beethoven (1951)). While some instrumental 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. An example of a musical without a fiction would be the abstract segment of Fantasia (Joe and Huemer 1940) depicting Bach's *Toccata and Fugue in D Minor*.

Richard Dyer (1992) suggested the formal nonrepresentational parts of music are in contradiction with representational signs in musicals, making them 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 suggested that the discontinuity of musical theatre is where the pleasure they offer 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 that compliments one another (Taylor 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* (Sharman 1975) shows how musical styles inform us about characters.² This connection may make it easier for audiences to intuitively understand the fiction of a musical without 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 categorized 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, p. 160) 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 and 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 et al. 1971) or West Side Story (Leonard and 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* (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.³ It would be simple to

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.

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 emphasize that they are closely related structurally.

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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. 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 (Taylor 2012; Whalen 2004). Mickey-mousing refers to the synchronized mimicry of a character's actions by the non-diegetic musical score. It is so-called after the musical scores of early Disney cartoons which helped signify scenes such as a character 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 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 role-play can naturally lead to many different narratives, such as 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 organized 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 nonfictional parts do not conflict, but actively combine with fictional ones as well.

3. Defining Information in Games

Let us suppose that in pornography and musicals 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 (such as 'absolute music' as categorized by Dahlhaus (1989)) or are representative as a matter of document (as in 'gonzo' pornography or commonly amateur pornography). 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? In games, this information is commonly associated with rules and rules are often established as a separate or opposite category to fiction by game scholars (Juul 2005; Salen and Zimmerman 2003), 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 'formal conventions' of music: time signatures, tempo, harmony and other concepts (primarily from western music theory). 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 centered on a dualistic interpretation of how games function—rules versus fiction). For lack of a better

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 deployed within a narrative context, I have tried to get beyond the 'fact' of sex to its rhetorical function in texts.' (Williams 1999, p. 270).

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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 organized 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), fictional inconsistencies may be experienced.

This analogy could be applied to the concepts of separated, integrated and dissolved fictions in musicals. Separated fictions often feature apparent fictional inconsistencies as the significant form of the musical has little to no conceptual or contextual connection to its fictional content (although this is not to say they are qualitatively better or worse than other fictions—a fiction can be inconsistent or good, consistent and bad simultaneously). A solution here is to just take separated musicals at face value and ignore the potential disruptions or inconsistencies or embrace separation as an aesthetic decision (e.g., parody, metafiction, satire etc.). Integrated musicals feature a conceptual and contextual union between the two and dissolved musicals operate 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 for fictional consistency in games, 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 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 analog?), 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, flavor 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 recognizable traits and

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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 (1990), Ryan (2001, 2007) and others (Castañeda 1979; Kit 1982; Howell 1979; Woods 2009) have encountered similar ambiguities in their examinations of definitions that oppose fiction to reality, nonfiction or truth. Walton 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, p. 91). 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.

Marie-Laure Ryan (2001, p. 109) assesses Walton's theory of representation as a game of make-believe stating: 'The assimilation of representation to fiction and the definition of the latter as a prop in a game of make-believe make the embarrassing prediction that texts designed to elicit belief, rather than make-believe, are not representations'. If belief (versus make-believe) is a condition on which we judge the fictionality of a text, as Walton (1990) suggests, then we must scrutinize whether something is understood to be fiction because we make-believe that it is so, or assess it as something other than fiction because we are led to genuinely believe it. Ryan writes that 'make-believe ... often confuses, two distinct phenomena: (1) regarding texts that describe obviously made-up situations as report of true facts ('willingly suspending disbelief'); and (2) engaging in an act of imagination ... ' (Ryan 2001, p. 110) the latter of which does not necessarily involve fiction. Ryan suggests that the concept of mental simulation is helpful in analyzing what make-believe might be understood to be. Imagination as an act of simulation is situated as both similar and different to fiction because of the intended usage and the quality of what is imagined. In Ryan (2007) discussion of a definition of narrative, she suggests that the status of fiction is partially a question of authorial intent.

If ... we are presented with unknown texts and asked: "is this fiction or nonfiction," our answers will be right or wrong, because they will not be an assessment of what the text is all about, but a guess of the author's intent. Fictionality is indeed a type of game that authors invite readers to play with texts: a game variously described as make-believe, suspended disbelief, or immersion in an imaginary world. The same text could, at least in principle, be presented as a creation of the imagination or as a truthful account of facts, and we must be guided by extra-textual signs, such as generic labels ('novel', 'short story') to assess its fictional status. Because judgments of fictionality affect what the reader will or will not believe, they are much more important than judgments of narrativity. (Ryan 2007, p. 32)

Fictional information comprises all of the information in a game that is exclusively fiction (as opposed to significant information). What determines its status is somewhat dependent on reading the creator's intent and is partially informed by intersubjective convention such as Ryan's example of 'generic labels'. Fiction's function, as Ryan and Walton note, 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, p. 91)

As is clear from Walton and Ryan's work, fiction covers 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 constructed by an author for the sake of imagination (and not necessarily belief) by an audience. The audience (in the case of musical, pornographic or game fictions) can arguably ignore the fiction of those works in preference of the significant information each of these provides. In the case of games this can take the form of subversive or purely instrumental play (such as speed-running) but ignoring fiction is not unique to games. Ignoring the significant information in any of these cases is arguably impossible given that it is to do with the very medium these practices are communicated through. One could arguably play on a lower difficulty or skip sections of gameplay but these decisions are not always made in preference of fictional information and still require some interaction with a system that is rooted in significant information. Likewise, it would be unusual if not impossible for the audiences of pornography and musicals to ignore the significant information unique to each in favor of their fictional information.

In order that our observations about the structure of fictions in musicals and pornography might be of use to games it is worth discussing some case studies that might come under my appropriation of Dyer's terminology. What is the structure of an integrated or dissolved game?

4. Case Studies—Integrated and Dissolved Games

Jesper Juul correctly identifies level design as an aspect of games that has potential for fictional consonance: '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] (Juul 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. 188–89). 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 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 Dyer's terminology reflects the structure of games. 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. 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 stylized fictional world. For the purposes of elaborating on world-building in games, I will apply these terms to several case studies. I propose Dark Souls (From Software 2011) as an example of an integrated game and Beat the Beat: Rhythm Paradise (Nintendo SPD and TNX Music Recordings 2011) as an example of a dissolved game. Specific case studies of separated games are not explored in this paper, but it is suggested that, currently, the majority of games constitute separated fictions in which the fictional and significant information have little to no overlap. A more in-depth study of separated games (specifically those that reflexively engage with fictional inconsistency) alongside other separated fictions is needed to determine the full use of Dyer's

terminology for games and whether separation constitutes a problem for games or if it is simply a different aesthetic consideration.

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 implications⁴. 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.⁵ Cursed ones are also branded with a Darksign by which they are recognized. This darksign, a symbol featured in the *Dark 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. 123–30)

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).

⁴ A similar conceit where repeated death is fictionally integrated can be found in the role-playing game *Planescape Torment* (Black Isle Studios 1999).

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.

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 the Donkey Kong case: '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. In practice, the seemingly inconsistent interruption of death in the course of gameplay is something that regular players of games can be said to be literate in. It is not such a jarring inconsistency that we classify these 'incoherent' games as aesthetically deficient because we are used to 'reading' death as a normal process of ludic failure. However, 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? What is the structural meaning of death within games given death's dual purpose as fail state and dramatically-charged fictional occurrence? How different information in games overlaps (or doesn't) is what needs to be understood. In any case it is clear that Dark Souls is achieving integration 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. They have three responses that are all rhythmically signaled 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.

Another example from *Rhythm Paradise*, 'Double Date' involves a couple of high-school students on a date near a sports field. 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.

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). 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.

A similar observation is made by Melanie Fritsch (2014) in her discussion of gameworlds that specifically frame themselves around music and thus construct a 'fantasy diegetic environment' that is consistent but not realistic or even necessarily narrativized. This is the case with Fritsch's analysis (Fritsch 2014, pp. 170–71) of *Vib-Ribbon* (NanaOn-Sha 1999) which, like *Rhythm Paradise's* world, does not offer explicit narratives so much as it uses music as a framework for an unrealistic but dissolved fictional world. Fritsch argues that games like this are constructed from a 'music-based gameplay gestalt' and that: 'It is music with all its features and contexts that blurs the borders of fantasy and reality by being the "real thing" within these gameworlds' (Fritsch 2014, p. 175). In this way a synaesthetic gestalt blends the abstract concerns of significant information in games and music with fictional information put forth by the representation of the game's world.

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. 186–87; 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 minigames all account for the need, fictionally, for there 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.

5. Conclusions

Musicals and pornography have provided a novel means of analyzing game fictions and developing some medium-agnostic terminology (fictional and significant information) for discussing fictional structure in games (and potentially other media). Williams' work on pornography shows that there is a solid theoretical precedent for importing Dyer's terminology to describe another medium and the games examined here indicate there is a good fit for the same terms within game studies.

Dark Souls and Rhythm Paradise form internally consistent fictions because they frame their fictional information and significant information in a congruent way. 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 fictionalize in every case. Plausible circumstances in a game should cue imagination to interpret repetition as natural. The 'numbers' of repetitive dialogue, animations, level design, and many other aspects of games all risk incurring disruptive experience of the fiction, as they do in musicals or pornography. Death and repetition are two frequently encountered states within games due to their structural make-up and integration or dissolution of these states with the fiction of a game is difficult to navigate. 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 at least some of the structural features of games.

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