

Game Theory

Embedded Narrative in Games

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Word count: 4753

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Introduction

This paper investigates player empowerment through embedded narratives, specifically how such narratives allow players to scale the narrative according to their own preferences. Answering this question will help equip narrative designers and level designers with the knowledge to implement embedded narrative techniques in the best possible way for their particular game and target audience.

My hypothesis is that embedded narratives impose themselves far less on the players, and that this allows players to decide on their own how much of the game's story they wish to experience by seeking it out and playing detectives to piece it together. By playing several games with embedded narratives and more traditional types of narratives (cutscenes, dialogue, in-game text) and then comparing the structure and scope of these different storytelling mechanics, I should be able to draw some conclusions about how different storytelling techniques interact with the rest of the play experience.

Theory and method

It's quite difficult to find materials that deal with embedded narratives in games. I came across the term in the article which serves as the foundation for this paper, Henry Jenkins' *Game Design as Narrative Architecture* (2004), which is an attempt to reconcile ludological theories with narratological ones. It was written as a reply to leading ludology theorists such as Eskelinen and Juul - particularly Juul's *A Clash Between Games and Narrative* (1998) is referenced several times. At the time when Jenkins' article was written, ludologists were still somewhat dogmatic in their efforts to stop what Aarseth called "the danger of generic criticism." (2004). One of Aarseth's central points is that since game studies are "virgin soil", there's a tendency for academics from other fields of culture study to attempt to apply their methods and theories to games with no respect for the ways in which computer games differ from previous media such as film or literature. Jenkins therefore dedicates most of his article to reflecting on how and to what extent the theories he's proposing to borrow can be translated and applied to game studies.

Jenkins appears to have been heavily influenced by a series of articles by Don Carson, a former show designer at Walt Disney Imagineering, who has written about the narrative techniques used for constructing theme parks and how they can inspire video games (Carson, 2000). I've found Jenkins' article very applicable for understanding game fiction, and I very much want to put his work to use, but it's been difficult finding sufficiently academic sources with which to expand on his work. In the end, I decided to go for a strictly analytical approach, using Jenkins' terminology along with more prescriptive design-oriented material such as Ken Levine's talk at the Game Developer's Conference in 2008 (Nutt, 2008) to analyse how narrative has been embedded in three modern games.

For my three objects of analysis, I chose *BioShock* and *Batman: Arkham Asylum*, both of which use embedded narrative extensively but in different ways, and *Dragon Age*, which uses it only rarely, for contrast. BioShock is particularly interesting because Ken Levine, the creative director on the project, has been quite outspoken about the design philosophies behind the game and their deliberate use of embedded narrative to cater to the most dedicated fans without forcing their story on less engaged players.

Spatial narratives

Jenkins argues "for an understanding of game designers less as storytellers and more as narrative architects." Jenkins identifies several types of "spatial narratives" that games can use. Jenkins' idea of "evocative spaces" is chiefly an objection to Jesper Juul's arguments against the importance of narrative in games. Jenkins argues that adapting a story from one media to another shouldn't necessarily require the plot to remain recognisable, as long as the new narrative evokes the original. To put it crudely, as long as *Knights of the Old Republic* features lightsabers, wookies, and dashing space scoundrels, it's a satisfying adaptation of *Star Wars* because the game's iconography will call back to the player's knowledge of a larger body of fiction.

Games can also use what Jenkins terms "micronarratives": small sequences of connected events strung together by the basic causality of the player's actions and framed by a larger, more structured plot. What Jenkins describes is essentially incidental scripted events or sequences. Jenkins focuses on the interactive type, such as AI responses to the player's actions. These are prominent in for example *Half-Life 2* where probably the most famous example must be the metrocop in the very beginning ordering the player to pick up a soda can and toss it in the trash bin - if players oblige, they are permitted to pass without incident, but if they refuse, the metrocop will attack the unarmed players, forcing them to flee. The *Call of Duty* games have many such small scripted events in the heat of battle, many of which are highlighted by comments from the allied characters. For example, allies may compliment you for clean kills or shout at you to stop firing if you shoot too close to them or even warn you of the location of enemies.

Emergent narratives are similar and related to micronarratives, but rather than being tightly scripted, they are allowed to emerge out of a complex system of game mechanics. Jenkins uses *The Sims* as an example of a game that has no narrative apart from what emerges naturally from the game system, but the *Splinter Cell* series is another example where the emergence occurs within and alongside a more traditional scripted narrative. For example, in *Splinter Cell: Chaos Theory*, the AI is advanced enough that I once saw an enemy fail to open a door because another enemy was in the way of the door opening, which prompted the first enemy to kick in the door, knocking out his colleague with the force of the impact. This could only happen because the AI system in *Splinter Cell 3* is designed to account for a wide range of general stimuli and trigger appropriate reactions. Though he was trying to argue for simulation to replace narrative, Gonzalo Frasca has described well the potential of narratives to emerge out of such complex game systems: "Simulation can now be used to model systems that were before way too complex to deal with. We now have a powerful alternative to representation and narrative to explain and understand our world." (Frasca, 2001). Frasca argues that meaning can be inferred just as well through the construction of simulations as the arranging of narratives, but the idea of emergent narrative takes it one step further and indicates that one can give rise to the other: in games, narrative does not have to be arranged by an author but rather the potential for narratives can be coded into a game system.

Finally, we get to embedded narratives: Jenkins describes embedded narratives as story and plot details built into the environments that the player will inhabit in the game. Jenkins describes how the players will have to gather these clues and form their own picture of the game's fiction. As Jenkins writes, this is quite similar to how film viewers mentally pick up on and rearrange the details of a film's story (fabula) as the plot (syuzhet) unfolds. A major difference is that many games let the player control the camera, in which case the extra responsibility of actively seeking out the embedded story clues with the camera is placed on

the player. Using films, Jenkins provides several good examples of how meaning can be embedded in environments and objects. I will further add that a game's character art can also be a strong vessel for narrative meaning, as anybody who has been attacked by the powerful externalisations of the player character's emotional problems in *Silent Hill 2* should be quick to agree with. In the section below as well as in my game analyses, I will further describe potential implementations of embedded narrative.

Narrative mechanics

Before I move on to my analysis of the embedded narratives in certain games, I will outline the various mechanics that games have used to convey their narratives, and provide a few arguments for how they tend to influence the player's experience of the game.

Cutscenes are probably the most straight-forward narrative mechanic used in games. As a storytelling device, they are what game designer Ken Levine has described as "push" narrative: "Levine thinks that you should build games that encourage the player to discover the narrative, rather than pushing it via cutscenes." (Nutt, 2008). Cutscenes can either be "in-game" (which is to say scripted and rendered inside the game engine) or "pre-rendered" (created and rendered as a video and decoded at runtime), but their common trait is that they temporarily take control away from the player. Many cutscenes allow you to skip them, but there is no room for customising the amount of narrative you get out of cutscenes - you watch it all or you get nothing. A notable exception is the graphic novel styled cutscenes in the *Max Payne* games which allow players to skip back and forth through them, providing the viewer with a finer degree of control.

A different method for achieving similar narrative power as cutscenes without taking control away from the player is scripted sequences. These are in-game cutscenes where the player is allowed to remain in control of his avatar. It may be useful to distinguish between scripted sequences that take place between action segments, such as the sequence in Steiner's lab near the beginning of *Half-Life 2*, and sequences that are executed during the normal action of the game, such as how the *Call of Duty* series tends to use them. The former is much more akin to traditional cutscenes, with the exception that the "camera" is replaced by the player's avatar and that it may be split into segments that trigger depending on the player's position and actions. The latter tends to be more like set dressing that the player may not experience fully because his or her attention may be otherwise engaged, as thus the player has to choose to "pull" the narrative in these sequences by actively paying attention to them.

Interactive dialogue systems can be considered a sort of subset of scripted sequences, especially in modern BioWare games such as *Mass Effect* or *Dragon Age* where engaging in dialogue with a character literally triggers a scripted cutscene interrupted by frequent dialogue choices. Whether interactive dialogue should be classified as push or pull narrative will - like scripted sequences - depend on the implementation: some games only impart mission critical information in their mandatory dialogue while relegating exposition to optional conversations - a good example of this is the conversations with Paul Denton at the beginning of *Deus Ex*, where the first conversation (which triggers automatically as he approaches you) is a simple mission briefing, while the second conversation (which is only played if you "use" Paul after the first conversation has ended) gives you some background on the relationship between Paul and the protagonist. Other games, such as *Dragon Age*, prefer to mix exposition and character development into the briefings,

making it harder to focus on your objectives if you don't care for the game's fiction. Either way, interactive dialogue is usually skippable, but far from all branching conversations have an early "exit" choice that terminates the dialogue, in which case the dialogue must be skipped one line at a time. Overall, I find that it is much harder to miss or even ignore narrative given through a dialogue system.

A less pushy mechanic for exposition is in-game text. This can take many forms, for example books or book-excerpts that can be read as you explore the game world (a common mechanic in role-playing games), notepads or similar left behind by the characters, computers that can be accessed within the game world and used to browse emails or websites (as seen in eg. *Jagged Alliance 2*, *Grand Theft Auto 4*, or *Shadowgrounds*), or even some sort of encyclopaedia of the game's fiction built into the GUI which may be fully accessible to begin with or gradually filled out as you explore the game world. A more advanced variant of this is audio or video recordings that the player can find in the game, such as the audio logs in *System Shock 2* or Wallace Breen's video broadcasts in *Half-Life 2*. Some games allow you to start these recordings and then continue playing while listening to the recording in the background, which allows players to absorb a bit of exposition without having to invest their complete attention in it.

Expositional text, audio, or video can also be reserved for briefings between levels or missions. Three different yet similar ways to do this are represented in *Hitman: Blood Money*, the *Call of Duty* series, and *StarCraft*. The recent *Call of Duty* games use a kind of slide show with voice-over to set up each mission. The venerable *StarCraft* used discussions between "talking heads" to brief you before each level. *Blood Money* had probably the most advanced briefing mechanics of the three, with detailed information about the location and the relevant characters before each level and a dynamically constructed newspaper article describing the results of your actions after each mission. Briefings such as these can generally be studied for as long as the player pleases or skipped entirely, except in cases where they double as loading screens.

Finally, the least pushy narrative is embedded in the environment and character art. Every game which isn't completely abstract has some degree of embedded narrative. *DOOM*, for example - not exactly known for its gripping narrative - recognisably takes place in a large facility of some kind which has been overrun by demons. As a *DOOM* player, you may not be able to tell that it takes place on Mars unless you read the intro text in the manual, but it's clear from the corpses that litter the halls that fighting has taken place, and on close inspection, some of the enemies are humans who have somehow been zombified. If you scrutinise the world textures in the game, you may even be able to infer some of the functions of the buildings you fight through, such as the space port in the beginning which is decorated with large computer consoles.

While the embedded narratives in many games stop at the general setting, the "Where Am I?" (Carson, 2000), some games very deliberately embed evidence about specific events in their environments and even their character art. These are what Carson calls "cause and effect vignettes" (ibid.). For example, upon finding a set of binoculars and a sniper rifle on the balcony of your pilot's apartment opposite the penthouse of femme fatale Maggie Chow in *Deus Ex*, it's safe to conclude - given the context of the mission - that he's had her under surveillance on suspicion of conspiracy for some time. Similarly, it only takes a little deduction to realise that the zombies with metal cages on their heads in the infamous Shalebridge Cradle level in *Thief: Deadly Shadows* are the reanimated corpses of the patients of the former psychiatric institution. By paying attention to which rooms each zombie haunts and comparing that to the diary snippets and patient files found around the building, it's further possible to deduce which zombie used to

be which patient. It's even possible to figure out how each of them died. These are very subtle details, however, and it's easy to play through the entire game without paying any attention to them what-so-ever.

BioShock

According to the creative director of BioShock, Ken Levine, the game was deliberately designed with three "levels" of narrative targeted at three different model players: the player who just wants to know who to shoot and where to go, the player who appreciates some narrative context for his or her actions, and the player who loves to engage with a narrative and dig out the details (Nutt, 2008). For this purpose, BioShock features a variety of storytelling mechanics, each existing on a certain narrative level.

On the most immediate level, radio messages are used to transmit your objectives to you regardless of where you are or what you're doing. These goals are also displayed in the upper right hand corner when they're added to your log or updated, which makes them very hard to miss even if you really don't care about the narrative context of the game. On at least one occasion, the game presents you with a scripted sequence that takes control of your avatar, which happens at a major plot point. This is arguably not necessary for your progress, and is thus an example of the game pushing its narrative on players who may not want it.

The second narrative level, which caters to players who are interested in the plot of the game but may not wish to spend hours hunting around for clues to meticulously piece together the game's background fiction, primarily operates through the audio logs, the animated apparitions that you may occasionally witness, and other scripted sequences. The audio logs are rarely difficult to find, but do at least require you to interact with them before their message is played to you. These logs are used to flesh out the portraits of the major characters in the story, and to a lesser extent to convey a bit of information about the setting. Scripted sequences are less common, but still used extensively throughout the game. These sequences are often used to introduce new enemies or characters, and since they don't take control away from you, you are free to ignore them, though they often do prevent your progress until they've played out.

The final level of the narrative is all in the past, and details the story of the underwater city of Rapture in which the game is set. This story must be inferred and pieced together from the environment art, the character art, and especially the propaganda generously distributed throughout the levels. This falls squarely into what Jenkins describes as embedded narratives as the player must "explore the game space and unlock its secrets".

BioShock thus seems like a game with very broad appeal: players who aren't interested in the narrative can safely ignore it all and simply follow the arrow pointing to their next objective, while players who demand narrative context will find plenty of it more or less secreted away throughout the game. This evaluation is to some extent based on my own personal experience of playing through BioShock with a friend who didn't even faintly care about the story of the game – when I was controlling, he was constantly urging me towards the next objective, complaining about my slow and methodical play style, and when he was controlling, I was always hassling him to slow down and pay attention to what was going on in the fiction.

Batman: Arkham Asylum

A game which uses embedded narrative in a similar but still distinct way to BioShock is Arkham Asylum. Being a game built on a superhero license, it has a strong element of what Jenkins calls Evocative Spaces. As its title implies, the game takes place in and around Arkham Asylum, a location which is central to the Batman setting, and much of the game's narrative calls back to the extensive fiction of the franchise.

The Batman fiction informs every part of Arkham Asylum's world. Much has been done to recreate the correct near-future gothic expression, for which the setting is well suited: a dark old estate erratically augmented with modern architecture and technology. More relevantly, every environment has been carefully constructed to encourage players to behave like Batman, using a multitude of equipment to access unusual routes through the levels, stalking through maintenance shafts and air vents, and perching predatorily on the many spurious gargoyles under the ceilings.

This evocation of a pre-existing body of fiction is also evident in how the game's developers have embedded certain narrative elements. Where BioShock's fiction was self-contained, and embedded clues could be constructed into a reasonably complete continuity, Arkham Asylum's clues constantly point out of the game, to characters and events that have no bearing on the plot and make no appearance in the game proper. This has the effect of making the game world seem much larger than it actually is.

Further, BioShock presented its background fiction almost like a jigsaw puzzle, where any investigation on the player's part would have no bearings on the development of the plot, whereas Arkham's embedded narrative is structured as a much more formalised scavenger hunt. Each collectible story snippet is given a slot in the user interface, and successfully finding and "photographing" every clue triggers a proper ending for a meta-plot involving an established villain, as well as a series of achievements on the X-Box 360 platform. Finally, the scavenged clues unlock new equipment and abilities for Batman that the player can put to use for advancing the main storyline.

This scavenger minigame involves locating "patient interview tapes" very similar to BioShock's audio logs and searching the environment for objects left behind or marked by characters from the Batman franchise. A minigame such as this is quite an interesting way to imbue the embedded narrative with meaning for players who don't care about the story, since they may still want to find all the collectibles in order to unlock new equipment and abilities for Batman.

Like BioShock, Arkham Asylum uses radio messages to transmit your next objective (along with an amount of mandatory plot exposition), but unlike BioShock, it also uses cinematics which could negatively affect the experience of players who don't care for the game's narrative.

Dragon Age

An example of a recent game which doesn't use embedded narratives to anywhere near the extent of BioShock or Arkham Asylum is Dragon Age. Dragon Age's narrative is, using Ken Levine's terminology, usually pushed towards the player. The game features lengthy exposition in the form of pre-rendered cinematics, in-game cutscenes, and interactive dialogue. This can usually be skipped, but at your own peril – you will frequently be required to choose what your avatar says, which may change your experience in unexpected ways.

This is not to say that the game has no pull narrative, however. Most notably, the game features a "codex", a sort of encyclopaedic database with articles about the game's setting, characters, and enemies, as well as poems, book excerpts, and notes that you come across throughout the game. Articles are added to this database as you encounter the relevant characters, places, or information, and though a few optional puzzles and side quests require you to read and understand certain codex entries, most of the codex can safely be ignored without making it difficult to complete the game. For example, if you click on a book in the game world which contains both lore about the setting and crucial information about a quest, the former is put in your codex and the latter is added to your quest log, making it easier to focus on your objectives without having to engage with the narrative.

To a certain extent, narrative has been embedded in the environment and character art as well. When you visit the elven district in the city, for example, it's immediately clear that it's a sort of slum area, which conveys the fact that the elves in *Dragon Age* are treated as an inferior species by the humans. This is distinguishable from how *BioShock* or *Arkham Asylum* treat their narratives in that those games have embedded evidence of specific events in their environments, whereas *Dragon Age's* environments tend to indicate broad situations or long-term historical developments.

Dragon Age does move closer to a more specific application of embedded narratives on a few occasions, however, such as when you find cages in a cave used by a dragon cult to train their draconic pets, or when the ravaged mage's tower begins to grow fleshy pustules as you move closer to the demon at the heart of the catastrophe that befell the building. Compared especially to *BioShock*, however, *Dragon Age* seems more eager to make sure all players experience the entire narrative, including these subtle environmental details. For example, in addition to showing players how the dragon cultists have stored their animals, the game later explicitly describes the symbiotic relationship between the cultists and the dragons both through dialogue and in codex entries.

More strikingly, several apartments in the elven slums which have been ransacked by human slavers contain effective and affecting clues about the elves' abduction such as an abandoned teddy bear on the floor, a broken vase, or a set of chairs arranged around a table as though the residents were just about to have dinner – yet this evidence is rendered somewhat less subtle by explicit descriptive text appearing above the objects if they are clicked. Whereas Ken Levine was apparently perfectly accepting of the fact that a lot of players may miss important details in *BioShock*, *Dragon Age's* developers seem to either value their story too highly to risk letting players miss some of it, or simply not trust that players will enjoy the story if they don't understand every detail.

Conclusion

Unless a game is very abstract, it will inevitably have some degree of narrative embedded in its environments and characters. In modern games, where the detail level is much higher than games from the DOOM era, the potential for embedding narrative details is enormous, and games such as BioShock and Arkham Asylum make full use of these capabilities. I agree with Ken Levine's opinions on the benefits of allowing players to opt out of parts of the narrative, and my experience shows that he succeeded in his design goal of using embedded narrative to let BioShock appeal both to players who devote themselves to exploring the game's fiction and players who have other motivations for playing.

In this paper, I have further shown that embedded narratives are easily compatible with more traditional storytelling techniques such as scripted sequences, dialogue systems, or even cutscenes. Arkham Asylum presents a very powerful narrative experience by using many of these techniques together, with cutscenes to carry the plot forward supported and extrapolated by embedded story elements.

Embedded narratives are by default optional, what Levine calls "pull"-narrative, which accommodates players who don't wish to engage with the fiction of a game not merely by not being mandatory (as skippable cutscenes are) but by requiring an active choice on the part of the player to seek out and piece together the story. However, this doesn't mean that embedded narratives have to be hidden or difficult to locate. There are ways to call extra attention to narrative details in the environment, as demonstrated by my analyses of both Arkham Asylum and Dragon Age.

My personal opinion is that embedded narratives are an excellent way to tell a story in video games, and though the technique clearly has things in common with how readers or audiences experience more linear media such as books or films, mentally constructing a story continuity from the plot they are presented with, the agency given to players in most videogames to control things like pacing and camera movement makes the technique very powerful by virtue of the extra participation it requires. Finally, at the risk of stating the obvious, mainstream video games seem far more likely than eg. blockbuster films to get away with telling very vague or obtuse stories that require a lot of analysis and imagination to piece together, since the primary motivation for many players is simply to play the game, interacting with its mechanics in order to achieve its goals.

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Games

Platform and publisher has been indicated for the version I've played and European release dates have been used where there's a difference.

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- 📖 *BioShock* (Xbox 360, 2007), Irrational Games, 2K Games.
- 📖 *Call of Duty* (PC, 2003), Infinity Ward, Activision.
- 📖 *Deus Ex* (PC, 2000), Ion Storm, Eidos Interactive.
- 📖 *DOOM* (PC, 1993), id Software, Midway Games.
- 📖 *Dragon Age* (PC, 2009), BioWare, Electronic Arts.
- 📖 *Grand Theft Auto 4* (Xbox 360, 2008), Rockstar Games.
- 📖 *Half-Life 2* (PC, 2004), Valve Corporation, Sierra Entertainment.
- 📖 *Hitman: Blood Money* (PC, 2006), IO Interactive, Eidos Interactive.
- 📖 *Jagged Alliance 2* (PC, 2002), Sir-Tech, TalonSoft.
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