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Game Design as Narrative Architecture
by Henry Jenkins

2004–07–10

Henry Jenkins uses narrative space to
distinguish between different tale-ends.

The relationship between games and story remains a divisive question among game fans, designers, and scholars alike. At a recent academic Games Studies conference, for example, a blood feud threatened to erupt between the self-proclaimed ludologists, who wanted to see the focus shift onto the mechanics of game play, and the narratologists, who were interested in studying games alongside other storytelling media. The term "ludology" was coined by Espen Aarseth, who advocates the emergence of a new field of study, specifically focused on the study of games and game play, rather than framed through the concerns of pre-existing disciplines or other media. (Editors' note: Markku Eskelinen, in his response to this essay, points out that the term was introduced to computer game studies by Gonzalo Frasca. This introduction, according to Frasca, was in the Cybertext Yearbook – a publication coedited by Eskelinen and named for Aarseth's Cybertext [1997].) Consider some recent statements made on this issue:
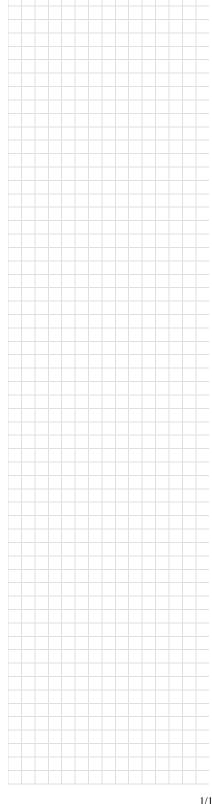
Interactivity is almost the opposite of narrative; narrative flows under the direction of the author, while interactivity depends on the player for motive power. (Adams 1999)

There is a direct, immediate conflict between the demands of a story and the demands of a game. Divergence from a story's path is likely to make for a less satisfying story; restricting a player's freedom of action is likely to make for a less satisfying game. (Costikyan 2000, 44-53)

Computer games are not narratives…. Rather the narrative tends to be isolated from or even work against the computer-game-ness of the game. (Juul 1998) For a more recent formulation of this same argument, see Jesper Juul (2001), "Games Telling Stories?"

Outside academic theory people are usually excellent at making distinctions between narrative, drama and games. If I throw a ball at you I don't expect you to drop it and wait until it starts telling stories. (Eskelinen 2001)

I find myself responding to this perspective with mixed feelings. On the one hand, I understand what these writers are arguing against – various attempts to map traditional narrative structures ("hypertext," "Interactive Cinema," "nonlinear narrative") onto games at the expense of an attention to their specificity as an emerging mode of entertainment. You say "narrative" to the average gamer and what they are apt to imagine is something on the order of a choose-your-own adventure book, a form noted for its lifelessness and mechanical exposition rather than enthralling entertainment, thematic sophistication, or character complexity. And game industry executives are perhaps justly skeptical that they have much to learn from the resolutely unpopular (and often overtly antipopular) aesthetics promoted by hypertext theorists. The application of film theory to games can seem heavy-handed and literal-minded, often failing to recognize the profound differences between the two media. Yet, at the same time, there is a tremendous amount that game designers and critics could learn through making meaningful comparisons with other storytelling media. One gets rid of narrative as a framework for thinking about games only at one's own risk. In this short piece, I hope to offer a middle-ground position between the ludologists and the narratologists,
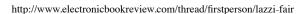
one that respects the particularity of this emerging medium – examining games less as stories than as spaces ripe with narrative possibility.

Let's start at some points where we might all agree:

1. Not all games tell stories. Games may be an abstract, expressive, and experiential form, closer to music or modern dance than to cinema. Some ballets (The Nutcracker for example) tell stories, but storytelling isn't an intrinsic or defining feature of dance. Similarly, many of my own favorite games – Tetris, Blix, Snood – are simple graphic games that do not lend themselves very well to narrative exposition. Eskelinen (2001) takes Janet Murray to task for her narrative analysis of Tetris as "a perfect enactment of the overtasked lives of Americans in the 1990s – of the constant bombardment of tasks that demand our attention and that we must somehow fit into our overcrowded schedules and clear off our desks in order to make room for the next onslaught." Eskelinen is correct to note that the abstraction of Tetris would seem to defy narrative interpretation, but that is not the same thing as insisting that no meaningful analysis can be made of the game and its fit within contemporary culture. Tetris might well express something of the frenzied pace of modern life, just as modern dances might, without being a story. To understand such games, we need other terms and concepts beyond narrative, including interface design and expressive movement for starters. The last thing we want to do is to reign in the creative experimentation that needs to occur in the earlier years of a medium's development.

2. Many games do have narrative aspirations. Minimally, they want to tap the emotional residue of previous narrative experiences. Often, they depend on our familiarity with the roles and goals of genre entertainment to orient us to the action, and in many cases, game designers want to create a series of narrative experiences for the player. Given those narrative aspirations, it seems reasonable to suggest that some understanding of how games relate to narrative is necessary before we understand the aesthetics of game design or the nature of contemporary game culture.

3. Narrative analysis need not be prescriptive, even if some narratologists – Janet Murray is the most oft-cited example – do seem to be advocating for games to pursue particular narrative forms. There is not one future of games. The goal should be to foster diversification of genres, aesthetics, and audiences, to open gamers to the broadest possible range of experiences. The past few years have been ones of enormous creative experimentation and innovation within the games industry, as might be represented by a list of some of the groundbreaking titles. The Sims, Black and White, Majestic, Shenmue; each represents profoundly different concepts of what makes for compelling game play. A discussion of the narrative potentials of games need not imply a privileging of storytelling over all the other possible things games can do, even if we might suggest that if game designers are going to tell stories, they should tell them well. In order to do that, game designers, who are most often schooled in computer science or graphic design, need to be retooled in the basic vocabulary of narrative theory.

4. The experience of playing games can never be simply reduced to the experience of a story. Many other factors that have little or nothing to do with storytelling per se contribute to the development of great games and we need to significantly broaden our critical vocabulary for talking about games to deal more fully with those other topics. Here, the ludologist's insistence that game scholars focus more attention on the mechanics of game play seems totally in order.

5. If some games tell stories, they are unlikely to tell them in the same ways that other media tell stories. Stories are not empty content that can be ported from one media pipeline to another. One would be hard-pressed, for example, to translate the internal dialogue of Proust's Remembrance of Things Past into a compelling cinematic experience, and the tight control over viewer experience that Hitchcock achieves in his suspense films would be directly antithetical to the aesthetics of good game design. We must, therefore, be attentive to the particularity of games as a medium, specifically what distinguishes them from other narrative traditions. Yet, in order to do so requires precise comparisons – not the mapping of old models onto games but a testing of those models against existing games to determine what features they share with other media and how they differ.

Much of the writing in the ludologist tradition is unduly polemical: they are so busy trying to pull game designers out of their "cinema envy" or

define a field where no hypertext theorist dares to venture that they are prematurely dismissing the use value of narrative for understanding their desired object of study. For my money, a series of conceptual blind spots prevent them from developing a full understanding of the interplay between narrative and games.

First, the discussion operates with too narrow a model of narrative, one preoccupied with the rules and conventions of classical linear storytelling at the expense of consideration of other kinds of narratives, not only the modernist and postmodernist experimentation that inspired the hypertext theorists, but also popular traditions that emphasize spatial exploration over causal event chains or which seek to balance the competing demands of narrative and spectacle. "A story is a collection of facts in a time-sequenced order that suggest a cause and effect relationship" (Crawford 1982). "The story is the antithesis of game. The best way to tell a story is in linear form. The best way to create a game is to provide a structure within which the player has freedom of action" (Costikyan, 2000).

Second, the discussion operates with too limited an understanding of narration, focusing more on the activities and aspirations of the storyteller and too little on the process of narrative comprehension. "In its richest form, storytelling – narrative – means the reader's surrender to the author. The author takes the reader by the hand and leads him into the world of his imagination. The reader has a role to play, but it's a fairly passive role: to pay attention, to understand, perhaps to think… but not to act" (Adams 1999).

Third, the discussion deals only with the question of whether whole games tell stories and not whether narrative elements might enter games at a more localized level. Finally, the discussion assumes that narratives must be self-contained rather than understanding games as serving some specific functions within a new transmedia storytelling environment. Rethinking each of these issues might lead us to a new understanding of the relationship between games and stories. Specifically, I want to introduce an important third term into this discussion – spatiality – and argue for an understanding of game designers less as storytellers and more as narrative architects.

Spatial Stories and Environmental Storytelling

Game designers don't simply tell stories; they design worlds and sculpt spaces. It is no accident, for example, that game design documents have historically been more interested in issues of level design than on plotting or character motivation. A prehistory of video and computer games might take us through the evolution of paper mazes or board games, both preoccupied with the design of spaces, even where they also provided some narrative context. Monopoly, for example, may tell a narrative about how fortunes are won and lost; the individual Chance cards may provide some story pretext for our gaining or losing a certain number of places; but ultimately, what we remember is the experience of moving around the board and landing on someone's real estate. Performance theorists have described role-playing games (RPGs) as a mode of collaborative storytelling, but the Dungeon Master's activities start with designing the space – the dungeon – where the players' quest will take place. Even many of the early text-based games, such as Zork, which could have told a wide array of different kinds of stories, centered around enabling players to move through narratively compelling spaces: "You are facing the north side of a white house. There is no door here, and all of the windows are boarded up. To the north a narrow path winds through the trees." The early Nintendo games have simple narrative hooks – rescue Princess Toadstool – but what gamers found astonishing when they first played them were their complex and imaginative graphic realms, which were so much more sophisticated than the simple grids that Pong or Pac-Man had offered us a decade earlier.

When we refer to such influential early works as Shigeru Miyamoto's Super Mario Bros. as "scroll games," we situate them alongside a much older tradition of spatial storytelling: many Japanese scroll paintings map, for example, the passing of the seasons onto an unfolding space. When you adapt a film into a game, the process typically involves translating events in the film into environments within the game. When gamer magazines want to describe the experience of gameplay, they are more likely to reproduce maps of the game world than to recount their narratives. As I

have noted elsewhere, these maps take a distinctive form – not objective or abstract top-down views but composites of screenshots that represent the game world as we will encounter it in our travels through its space. Game space never exists in abstract, but always experientially. Before we can talk about game narratives, then, we need to talk about game spaces. Across a series of essays, I have made the case that game consoles should be regarded as machines for generating compelling spaces, that their virtual playspaces have helped to compensate for the declining place of the traditional backyard in contemporary boy culture, and that the core narratives behind many games center around the struggle to explore, map, and master contested spaces (Fuller and Jenkins 1994; Jenkins 1998). Here, I want to broaden that discussion further to consider in what ways the structuring of game space facilitates different kinds of narrative experiences.

As such, games fit within a much older tradition of spatial stories, which have often taken the form of hero's odysseys, quest myths, or travel narratives. My concept of spatial stories is strongly influenced by Michel de Certeau (1988) The Practice of Everyday Life and Henri LeFebvre (1991), The Production of Space. The best works of J.R.R. Tolkien, Jules Verne, Homer, L. Frank Baum, or Jack London fall loosely within this tradition, as does, for example, the sequence in War and Peace that describes Pierre's aimless wanderings across the battlefield at Borodino. Often, such works exist on the outer borders of literature. They are much loved by readers, to be sure, and passed down from one generation to another, but they rarely figure in the canon of great literary works. How often, for example, has science fiction been criticized for being preoccupied with world-making at the expense of character psychology or plot development?

These writers seem constantly to be pushing against the limits of what can be accomplished in a printed text and thus their works fare badly against aesthetic standards defined around classically constructed novels. In many cases, the characters – our guides through these richly developed worlds – are stripped down to the bare bones, description displaces exposition, and plots fragment into a series of episodes and encounters. When game designers draw story elements from existing film or literary genres, they are most apt to tap those genres – fantasy, adventure, science fiction, horror, war – which are most invested in world-making and spatial storytelling. Games, in turn, may more fully realize the spatiality of these stories, giving a much more immersive and compelling representation of their narrative worlds. Anyone who doubts that Tolstoy might have achieved his true calling as a game designer should reread the final segment of War and Peace where he works through how a series of alternative choices might have reversed the outcome of Napoleon's Russian campaign. The passage is dead weight in the context of a novel, yet it outlines ideas that could be easily communicated in god-games such as those in the Civilization series (figure 10.1).
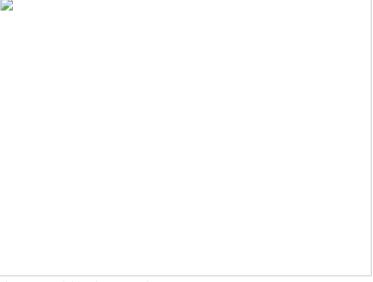

Figure 10.1: Civilization 3. (Atari)

Don Carson, who worked as a Senior Show Designer for Walt Disney Imagineering, has argued that game designers can learn a great deal by

studying techniques of "environmental storytelling," which Disney employs in designing amusement park attractions. Carson explains,

The story element is infused into the physical space a guest walks or rides through. It is the physical space that does much of the work of conveying the story the designers are trying to tell…. Armed only with their own knowledge of the world, and those visions collected from movies and books, the audience is ripe to be dropped into your adventure. The trick is to play on those memories and expectations to heighten the thrill of venturing into your created universe. (Carson 2000)

The amusement park attraction doesn't so much reproduce the story of a literary work, such as The Wind in the Willows, as it evokes its atmosphere; the original story provides "a set of rules that will guide the design and project team to a common goal" and that will help give structure and meaning to the visitor's experience. If, for example, the attraction centers around pirates, Carson writes, "every texture you use, every sound you play, every turn in the road should reinforce the concept of pirates," while any contradictory element may shatter the sense of immersion into this narrative universe. The same might be said for a game such as Sea Dogs, which, no less than Pirates of the Caribbean, depends on its ability to map our preexisting pirate fantasies. The most significant difference is that amusement park designers count on visitors keeping their hands and arms in the car at all times and thus have a greater control in shaping our total experience, whereas game designers have to develop worlds where we can touch, grab, and fling things about at will.

Environmental storytelling creates the preconditions for an immersive narrative experience in at least one of four ways: spatial stories can evoke pre-existing narrative associations; they can provide a staging ground where narrative events are enacted; they may embed narrative information within their mise-en-scene; or they provide resources for emergent narratives.

Evocative Spaces

The most compelling amusement park attractions build upon stories or genre traditions already well-known to visitors, allowing them to enter physically into spaces they have visited many times before in their fantasies. These attractions may either remediate a preexisting story (Back to the Future) or draw upon a broadly shared genre tradition (Disney's Haunted Mansion). Such works do not so much tell self-contained stories as draw upon our previously existing narrative competencies. They can paint their worlds in fairly broad outlines and count on the visitor/player to do the rest. Something similar might be said of many games. For example, American McGee's Alice[TM] is an original interpretation of Lewis Carroll's Alice in Wonderland (figure 10.2).

Figure 10.2: American McGee's Alice (Rogue Entertainment, Electronic Arts)

Alice has been pushed into madness after years of living with uncertainty about whether her Wonderland experiences were real or hallucinations; now, she's come back into this world and is looking for blood. McGee's wonderland is not a whimsical dreamscape but a dark nightmare realm. McGee can safely assume that players start the game with a pretty well-developed mental map of the spaces, characters, and situations associated with Carroll's fictional universe and that they will read his distorted and often monstrous images against the background of mental images formed from previous encounters with storybook illustrations and Disney movies. McGee rewrites Alice's story in large part by redesigning Alice's spaces.

Arguing against games as stories, Jesper Juul suggests that, "you clearly can't deduct the story of Star Wars from Star Wars the game," whereas a film version of a novel will give you at least the broad outlines of the plot (Juul 1998). This is a pretty old-fashioned model of the process of adaptation. Increasingly, we inhabit a world of transmedia storytelling, one that depends less on each individual work being self-sufficient than on each work contributing to a larger narrative economy. The Star Wars game may not simply retell the story of Star Wars, but it doesn't have to in order to enrich or expand our experience of the Star Wars saga.

We already know the story before we even buy the game and would be frustrated if all it offered us was a regurgitation of the original film experience. Rather, the Star Wars game exists in dialogue with the films, conveying new narrative experiences through its creative manipulation of environmental details. One can imagine games taking their place within a larger narrative system with story information communicated through books, film, television, comics, and other media, each doing what it does best, each a relatively autonomous experience, but the richest understanding of the story world coming to those who follow the narrative across the various channels. In such a system, what games do best will almost certainly center around their ability to give concrete shape to our memories and imaginings of the storyworld, creating an immersive environment we can wander through and interact with.

Enacting Stories

Most often, when we discuss games as stories, we are referring to games that either enable players to perform or witness narrative events – for example, to grab a light-saber and dispatch Darth Maul in a Star Wars game. Narrative enters such games on two levels – in terms of broadly defined goals or conflicts and on the level of localized incidents.

Many game critics assume that all stories must be classically constructed with each element tightly integrated into the overall plot trajectory. Costikyan (2000) writes, for example, that "a story is a controlled experience; the author consciously crafts it, choosing certain events precisely, in a certain order, to create a story with maximum impact." For a fuller discussion of the norms of classically constructed narrative, see Bordwell, Staiger, and Thompson (1985), The Classical Hollywood Cinema.

Adams (1999) claims, "a good story hangs together the way a good jigsaw puzzle hangs together. When you pick it up, every piece is locked tightly in place next to its neighbors." Spatial stories, on the other hand, are often dismissed as episodic – that is, each episode (or set piece) can become compelling on its own terms without contributing significantly to the plot development, and often the episodes could be reordered without significantly impacting our experience as a whole. There may be broad movements or series of stages within the story, as Troy Dunniway suggests when he draws parallels between the stages in the Hero's journey (as outlined by Joseph Campbell) and the levels of a classic adventure game, but within each stage, the sequencing of actions may be quite loose. Spatial stories are not badly constructed stories; rather, they are stories that respond to alternative aesthetic principles, privileging spatial exploration over plot development. Spatial stories are held together by broadly defined goals and conflicts and pushed forward by the character's movement across the map. Their resolution often hinges on the player reaching his or her final destination, though, as Mary Fuller notes, not all travel narratives end successfully or resolve the narrative enigmas that set them into motion. Once again, we are back to principles of "environmental storytelling." The organization of the plot becomes a matter of designing the geography of imaginary worlds, so that obstacles thwart and affordances facilitate the protagonist's forward movement towards resolution. Over the past several decades, game designers have become more and more adept at setting and varying the rhythm of game play through features of the game space.

Narrative can also enter games on the level of localized incident, or what I am calling micronarratives. We might understand how micronarratives work by thinking about the Odessa Steps sequence in Sergei Eisenstein's Battleship Potemkin. First, recognize that, whatever its serious moral tone, the scene basically deals with the same kind of material as most games – the steps are a contested space with one group (the peasants) trying to advance up and another (the Cossacks) moving down.

Eisenstein intensifies our emotional engagement with this large-scale conflict through a series of short narrative units. The woman with the baby carriage is perhaps the best known of those micronarratives. Each of these units builds upon stock characters or situations drawn from the repertoire of melodrama. None of them last more than a few seconds, though Eisenstein prolongs them (and intensifies their emotional impact) through cross-cutting between multiple incidents. Eisenstein used the term "attraction" to describe such emotionally packed elements in his work; contemporary game designers might call them "memorable moments." Just as some memorable moments in games depend on sensations (the sense of speed in a racing game) or perceptions (the sudden expanse of sky in a snowboarding game) as well as narrative hooks, Eisenstein used the word "attractions" broadly to describe any element within a work that produces a profound emotional impact, and theorized that the themes of the work could be communicated across and through these discrete elements. Even games that do not create large-scale plot trajectories may well depend on these micronarratives to shape the player's emotional experience. Micronarratives may be cut-scenes, but they don't have to be. One can imagine a simple sequence of preprogrammed actions through which an opposing player responds to your successful touchdown in a football game as a micronarrative.

Game critics often note that the player's participation poses a potential threat to the narrative construction, whereas the hard rails of the plotting

can overly constrain the "freedom, power, and self-expression" associated with interactivity (Adams 1999). The tension between performance (or game play) and exposition (or story) is far from unique to games. The pleasures of popular culture often center on spectacular performance numbers and self-contained set pieces. It makes no sense to describe musical numbers or gag sequences or action scenes as disruptions of the film's plots: the reason we go to see a kung fu movie is to see Jackie Chan show his stuff. For useful discussion of this issue in film theory, see Donald Crafton (1995), "Pie and Chase: Gag, Spectacle and Narrative in Slapstick Comedy," in Kristine Brunovska Karnick and Henry Jenkins (eds.), Classical Hollywood Comedy; Henry Jenkins (1991), What Made Pistachio Nuts?: Early Sound Comedy and The Vaudeville Aesthetic; Rick Altman (1999), The American Film Musical; Tom Gunning (1990), "The Cinema of Attractions: Early Film, Its Spectator and the Avant Garde" in Thomas Elsaesser with Adam Barker (eds.), Early Cinema: Space, Frame, Narrative; Linda Williams (1999), Hard Core: Power, Pleasure and "The Frenzy of the Visible." Yet, few films consist simply of such moments, typically falling back on some broad narrative exposition to create a framework within which localized actions become meaningful. "Games that just have nonstop action are fun for a while but often get boring. This is because of the lack of intrigue, suspense, and drama. How many action movies have you seen where the hero of the story shoots his gun every few seconds and is always on the run? People lose interest watching this kind of movie. Playing a game is a bit different, but the fact is the brain becomes over stimulated after too much nonstop action" (Dunniway 2000).

We might describe musicals, action films, or slapstick comedies as having accordion-like structures. Certain plot points are fixed, whereas other moments can be expanded or contracted in response to audience feedback without serious consequences to the overall plot. The introduction needs to establish the character's goals or explain the basic conflict; the conclusion needs to show the successful completion of those goals or the final defeat of the antagonist. In *commedia dell'arte*, for example, the masks define the relationships between the characters and give us some sense of their goals and desires. See, for example, John Rudlin (1994), Commedia Dell'Arte: An Actor's Handbook for a detailed inventory of the masks and *lazzi* of this tradition.

The masks set limits on the action, even though the performance as a whole is created through improvisation. The actors have mastered the possible moves, or *lazzi*, associated with each character, much as a game player has mastered the combination of buttons that must be pushed to enable certain character actions. No author prescribes what the actors do once they get on the stage, but the shape of the story emerges from this basic vocabulary of possible actions and from the broad parameters set by this theatrical tradition. Some of the *lazzi* can contribute to the plot development, but many of them are simple restagings of the basic oppositions (the knave tricks the master or gets beaten).

These performance or spectacle-centered genres often display a pleasure in process – in the experiences along the road – that can overwhelm any strong sense of goal or resolution, while exposition can be experienced as an unwelcome interruption to the pleasure of performance. Game designers struggle with this same balancing act – trying to determine how much plot will create a compelling framework and how much freedom players can enjoy at a local level without totally derailing the larger narrative trajectory. As inexperienced storytellers, they often fall back on rather mechanical exposition through cut scenes, much as early filmmakers were sometimes overly reliant on intertitles rather than learning the skills of visual storytelling. Yet, as with any other aesthetic tradition, game designers are apt to develop craft through a process of experimentation and refinement of basic narrative devices, becoming better at shaping narrative experiences without unduly constraining the space for improvisation within the game.

Embedded Narratives

Russian formalist critics make a useful distinction between plot (or syuzhet) that refers to, in Kristen Thompson's (1988) terms, "the structured set of all causal events as we see and hear them presented in the film itself," and story (or fabula), which refers to the viewer's mental construction of the chronology of those events (Thompson 1988, 39-40).

Few films or novels are absolutely linear; most make use of some forms of backstory that is revealed gradually as we move through the narrative action. The detective story is the classic illustration of this principle, telling two stories – one more or less chronological (the story of the investigation itself) and the other told radically out of sequence (the events motivating and leading up to the murder).

According to this model, narrative comprehension is an active process by which viewers assemble and make hypotheses about likely narrative developments on the basis of information drawn from textual cues and clues. See, for example, David Bordwell (1989), Narration in the Fiction Film, and Edward Branigan (1992), Narrative Comprehension and Film. As they move through the film, spectators test and reformulate their mental maps of the narrative action and the story space. In games, players are forced to act upon those mental maps, to literally test them against the game world itself. If you are wrong about whether the bad guys lurk behind the next door, you will find out soon enough – perhaps by being blown away and having to start the game over. The heavy-handed exposition that opens many games serves a useful function in orienting spectators to the core premises so that they are less likely to make stupid and costly errors as they first enter into the game world. Some games create a space for rehearsal, as well, so that we can make sure we understand our character's potential moves before we come up against the challenges of navigating narrational space.

Read in this light, a story is less a temporal structure than a body of information. The author of a film or a book has a high degree of control over when and if we receive specific bits of information, but a game designer can somewhat control the narrational process by distributing the information across the game space. Within an open-ended and exploratory narrative structure like a game, essential narrative information must be presented redundantly across a range of spaces and artifacts, because one cannot assume the player will necessarily locate or recognize the significance of any given element. Game designers have developed a variety of kludges that allow them to prompt players or steer them towards narratively salient spaces. Yet, this is no different from the ways that redundancy is built into a television soap opera, where the assumption is that a certain number of viewers are apt to miss any given episode, or even in classical Hollywood narrative, where the law of three suggests that any essential plot point needs to be communicated in at least three ways.

To continue with the detective example, then, one can imagine the game designer as developing two kinds of narratives – one relatively unstructured and controlled by the player as they explore the game space and unlock its secrets; the other prestructured but embedded within the mise-en-scene awaiting discovery. The game world becomes a kind of information space, a memory palace. Myst is a highly successful example of this kind of embedded narrative, but embedded narrative does not necessarily require an emptying of the space of contemporary narrative activities, as a game such as Half-Life might suggest. Embedded narrative can and often does occur within contested spaces. We may have to battle our way past antagonists, navigate through mazes, or figure out how to pick locks in order to move through the narratively impregnated mise-en-scene. Such a mixture of enacted and embedded narrative elements can allow for a balance between the flexibility of interactivity and the coherence of a pre-authored narrative.

Using Quake as an example, Jesper Juul argues that flashbacks are impossible within games, because the game play always occurs in real-time (Juul 1998). Yet, this is to confuse story and plot. Games are no more locked into an eternal present than films are always linear. Many games contain moments of revelation or artifacts that shed light on past actions. Carson (2000) suggests that part of the art of game design comes in finding artful ways of embedding narrative information into the environment without destroying its immersiveness and without giving the player a sensation of being drug around by the neck:

Staged areas… [can] lead the game player to come to their own conclusions about a previous event or to suggest a potential danger just ahead. Some examples include… doors that have been broken open, traces of a recent explosion, a crashed vehicle, a piano dropped from a great height, charred remains of a fire.

Players, he argues, can return to a familiar space later in the game and discover it has been transformed by subsequent (off-screen) events. Clive Barker's Undying, for example, creates a powerful sense of backstory in precisely this manner. It is a story of sibling rivalry that has taken on supernatural dimensions. As we visit each character's space, we have a sense of the human they once were and the demon they have become. In Peter Molyneux's Black and White, the player's ethical choices within the game leave traces on the landscape or reconfigure the physical appearances of their characters. Here, we might read narrative consequences off mise-en-scene the same way we read Dorian Gray's debauchery off of his portrait. Carson describes such narrative devices as "following Saknussemm," referring to the ways that the protagonists of Jules Verne's Journey to The Center of the Earth keep stumbling across clues and artifacts left behind by the sixteenth-century Icelandic scientist/explorer Arne Saknussemm, and readers become fascinated to see what they can learn about his ultimate fate as the travelers come closer to reaching their intended destination.

Game designers might study melodrama for a better understanding of how artifacts or spaces can contain affective potential or communicate significant narrative information. Melodrama depends on the external projection of internal states, often through costume design, art direction, or lighting choices. As we enter spaces, we may become overwhelmed with powerful feelings of loss or nostalgia, especially in those instances where the space has been transformed by narrative events. Consider, for example, the moment in Doctor Zhivago when the characters return to the mansion, now completely deserted and encased in ice, or when Scarlett O'Hara travels across the scorched remains of her family estate in Gone With the Wind following the burning of Atlanta. In Alfred Hitchcock's Rebecca, the title character never appears, but she exerts a powerful influence over the other characters – especially the second Mrs. DeWinter, who must inhabit a space where every artifact recalls her predecessor. Hitchcock creates a number of scenes of his protagonist wandering through Rebecca's space, passing through locked doors, staring at her overwhelming portrait on the wall, touching her things in drawers, or feeling the texture of fabrics and curtains. No matter where she goes in the house, she cannot escape Rebecca's memory.

A game such as Neil Young's Majestic pushes this notion of embedded narrative to its logical extreme. Here, the embedded narrative is no longer contained within the console but rather flows across multiple information channels. The player's activity consists of sorting through documents, deciphering codes, making sense of garbled transmissions, moving step-by-step towards a fuller understanding of the conspiracy that is the game's primary narrative focus. We follow links between web sites; we get information through webcasts, faxes, e-mails, and phone calls. Such an embedded narrative doesn't require a branching story structure but rather depends on scrambling the pieces of a linear story and allowing us to reconstruct the plot through our acts of detection, speculation, exploration, and decryption. Not surprisingly, most embedded narratives, at present, take the form of detective or conspiracy stories, since these genres help to motivate the player's active examination of clues and exploration of spaces and provide a rationale for our efforts to reconstruct the narrative of past events. Yet, as the preceding examples suggest, melodrama provides another – and as yet largely unexplored – model for how an embedded story might work, as we read letters and diaries, snoop around in bedroom drawers and closets, in search of secrets that might shed light on the relationships between characters.

Emergent Narratives

The Sims represents a fourth model of how narrative possibilities might get mapped onto game space (figure 10.3). Emergent narratives are not prestructured or preprogrammed, taking shape through the game play, yet they are not as unstructured, chaotic, and frustrating as life itself. Game worlds, ultimately, are not real worlds, even those as densely developed as Shenmue or as geographically expansive as Everquest. Will Wright frequently describes The Sims as a sandbox or dollhouse game, suggesting that it should be understood as a kind of authoring environment within which players can define their own goals and write their own stories. Yet, unlike Microsoft Word, the game doesn't open on a blank screen. Most players come away from spending time with The Sims with some degree of

narrative satisfaction. Wright has created a world ripe with narrative possibilities, where each design decision has been made with an eye towards increasing the prospects of interpersonal romance or conflict.
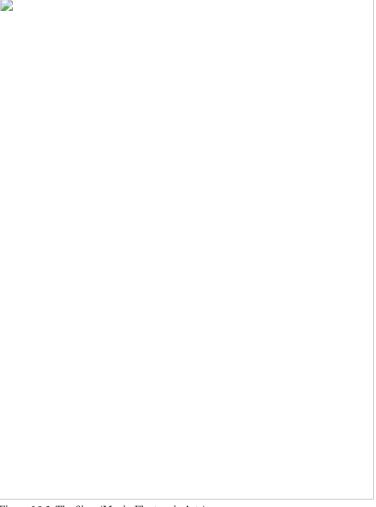

Figure 10.3: The Sims (Maxis, Electronic Arts)

The ability to design our own "skins" encourages players to create characters who are emotionally significant to them, to rehearse their own relationships with friends, family, or coworkers or to map characters from other fictional universes onto The Sims. A glance at the various scrapbooks players have posted on the web suggests that they have been quick to take advantage of its relatively open-ended structure. Yet, let's not underestimate the designers' contributions. The characters have a will of their own, not always submitting easily to the player's control, as when a depressed protagonist refuses to seek employment, preferring to spend hour upon hour soaking in their bath or moping on the front porch.

Characters are given desires, urges, and needs, which can come into conflict with each other, and thus produce dramatically compelling encounters. Characters respond emotionally to events in their environment, as when characters mourn the loss of a loved one. Our choices have consequences, as when we spend all of our money and have nothing left to buy them food. The gibberish language and flashing symbols allow us to map our own meanings onto the conversations, yet the tone of voice and body language can powerfully express specific emotional states, which encourage us to understand those interactions within familiar plot situations. The designers have made choices about what kinds of actions are and are not possible in this world, such as allowing for same-sex kisses, but limiting the degree of explicit sexual activity that can occur. (Good programmers may be able to get around such restrictions, but most players probably work within the limitations of the system as given.)

Janet Murray's Hamlet on the Holodeck might describe some of what Wright accomplishes here as procedural authorship. Yet, I would argue that his choices go deeper than this, working not simply through the programming, but also through the design of the game space. For example, just as a dollhouse offers a streamlined representation that cuts out much

of the clutter of an actual domestic space, the Sims' houses are stripped down to only a small number of artifacts, each of which perform specific kinds of narrative functions. Newspapers, for example, communicate job information. Characters sleep in beds. Bookcases can make you smarter. Bottles are for spinning and thus motivating lots of kissing. Such choices result in a highly legible narrative space. In his classic study The Image of The City, Kevin Lynch made the case that urban designers needed to be more sensitive to the narrative potentials of city spaces, describing city planning as "the deliberate manipulation of the world for sensuous ends" (Lynch 1960, 116).

Urban designers exert even less control than game designers over how people use the spaces they create or what kinds of scenes they stage there. Yet, some kinds of space lend themselves more readily to narratively memorable or emotionally meaningful experiences than others. Lynch suggested that urban planners should not attempt to totally predetermine the uses and meanings of the spaces they create: "a landscape whose every rock tells a story may make difficult the creation of fresh stories" (Lynch 1960, 6). Rather, he proposes an aesthetic of urban design that endows each space with "poetic and symbolic" potential: "Such a sense of place in itself enhances every human activity that occurs there, and encourages the deposit of a memory trace" (Lynch 1960, 119). Game designers would do well to study Lynch's book, especially as they move into the production of game platforms which support player-generated narratives.

In each of these cases, choices about the design and organization of game spaces have narratological consequences. In the case of evoked narratives, spatial design can either enhance our sense of immersion within a familiar world or communicate a fresh perspective on that story through the altering of established details. In the case of enacted narratives, the story itself may be structured around the character's movement through space and the features of the environment may retard or accelerate that plot trajectory. In the case of embedded narratives, the game space becomes a memory palace whose contents must be deciphered as the player tries to reconstruct the plot. And in the case of emergent narratives, game spaces are designed to be rich with narrative potential, enabling the story-constructing activity of players. In each case, it makes sense to think of game designers less as storytellers than as narrative architects.

Responses

Markku Eskelinen responds

Jon McKenzie responds

Henry Jenkins reponds

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hypertext, interaction, games, gaming, the nutcracker, tetris, blix, snood, marcel proust, remembrance of things past, jack london, monopoly, chance, RPG, RPGs, role-playing games, zork, pong, pac-man, shigeru miyamoto, super mario brothers, tolstoy, war