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Unit 3: Play

GAMES AS NARRATIVE PLAY



situation
character
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embedded narrative
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Imagine you're in a one-man space shuttle traveling through the heavens at the speed of light. You and your tiny ship are totally engulfed in darkness, except for the luminance of an occasional passing star.

Suddenly, without warning, there's a brilliant flash straight ahead. You check the radar screen. Nothing. Pretty soon there's another flash, and another. Next thing you know the flashes have turned into one gigantic force field of some kind and it's dead ahead. You check the radar screen, still nothing.

The colors in this mysterious force field are so bright, they're almost blinding. And they seem to be in layers. But the strangest thing is that nothing shows up on the radar screen. What could that mean? Is it possible to travel through this mysterious force field or will you crash and be destroyed? And what about the layers? If you make it through one, can you make it through the next, and the next? It's decision time and there are only a few seconds to think about it. Turn back or blast ahead and try to make it through the layers of this brightly colored force field. It's up to you.—Atari Super Breakout Game Program Instructions

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Introducing Narrative Play

Consider the card game War as an epic battle between the forces of good and evil, waged with a deck of cards and the laws of probability. Imagine Wipeout XL as a future sport circa 2097, in which corporate-sponsored, gravity-defying hoverships speed through impossible race tracks and hurl reality-warping weapons at each other for the pleasure of bloodthirsty fans. Experience Super Breakout as a conflict between a brave one-man space shuttle and a mysterious force field of blinding intensity, a gigantic array of color and light. Light up the engine. Energize the laser blaster. Check the radar screen. Blackness, a flash of light, and then...you are playing the game. The story, your story, begins.

Playing a game means interacting with and within a representational universe, a space of possibility with narrative dimensions. In *Oddworld: Abe's Exoddus*, players fight the Glukkons of the rapacious Magog Cartel to save their fellow Mudokens from a life of slavery in the mines of Necrum. In *Driver: You Are the Wheelman*, players take the role of Turner, a cop who goes undercover to infiltrate the Castaldi family, the underworld's most dangerous organization. In *Monopoly*, players are ruthless land barons vying for total economic domination of Atlantic City.

Formed by rules and experienced through play, a game is a space of possible action that players activate, manipulate, explore, and transform. When we frame this space of possibility as a narrative space, a special set of questions arise: Where do narratives in a game reside? How can one design games as narrative experiences? What kinds of narrative experiences do games make possible? What is the role of narrative in the design of meaningful play? We address these questions within this schema, *Games as Narrative Play*.

Each of these questions emphasizes a design-centric relationship between narratives and games. Because this chapter's potential terrain is so vast, we keep our investigation tightly

focused. We do not ask, for example, "Are games stories?" or "How do we create better narratives?" These kinds of questions focus more generally on the nature of narrative itself, rather than on the role of narrative as experienced through game play. In this chapter, it is not a question of *whether* games are narrative, but *how* they are narrative.

Part of the challenge of talking about the experience of narrative in games are the many shapes it can take. Particularly in digital games, there is a proliferation of forms, often within a single game. For instance, how do players experience the "narrative" of DOOM? Is it by way of the "backstory" that we read on the back of the game box, concerning a lone soldier staving off an invasion of Earth by extra-dimensional demonic creatures? Do the opening title screen and between-level story updates play a role in the narrative experience? Is it through the play itself, a narrative structure that demands split-second timing, management of resources, navigation of space via POV and top-down maps, and a horrible death followed by rebirth at the last save point? What about the qualities and attributes of the game's characters, setting, and plot? As we discover, each of these elements contribute to the narrative play of a game in their own unique ways.

This schema is tied tightly to the chapters that precede and follow. *Games as the Play of Meaning*, *Games as Narrative Play*, and *Games as the Play of Simulation* together explore the ways that games operate as systems of representation. In *Games as the Play of Meaning*, we further developed our ongoing discussion of how games generate meaningful play through the process of signification. In this chapter, we pull back to look at larger questions of games and the experience of narrative representation. In the next chapter on simulation, we zoom back in to investigate the more atomic structures of games as representational systems, linking together signification, simulation, and storytelling.

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Narrative Tensions

Using other media as starting points, we may learn many things about the construction of fictive worlds, characters...but relying too heavily on existing theories will make us forget what makes games games: Such as rules, goals, player activity, the projection of the player's actions into the game world, the way the game defines the possible actions of the player. It is the unique parts that we need to study now.—Jesper Juul, "Games Telling Stories?"

The intersection of the terms "narrative" and "game" has been surprisingly contentious in the study and design of games. In recent years, scholars and students of literature, film, and electronic narrative forms such as hypertext have gravitated toward the study of computer games. As disciplines outside of game design have studied games from the perspective of their own fields, debates have arisen over who has the right to make statements about games and narrativity, and exactly how to make such statements. These turf wars are symptomatic of the difficulty inherent in studying external media in the context of one's own discipline. Jesper Juul is correct in reminding us of the danger of relying too heavily on existing theories, particularly theories borrowed from other fields. For example, using literary theory to argue that all games are (or aren't) narratives ultimately doesn't offer much utility for game design.

Discussions of games as "interactive narratives" predictably fall into polarizing debates about linear vs. non-linear storytelling, of *games as stories* or *stories as games*. Some say that games and narrative are mutually exclusive concepts; others that some games are narrative whereas others are not. Consider the following excerpts from an online discussion of games and narrative by game designers/theorists Greg Costikyan and Brenda Laurel:

Greg Costikyan: A story is best envisioned as "beads on a string," a linear narrative; a game is best envisioned as a triangle of possibility, with the initial position at one apex, and possible conclusions

along the opposite side, with myriad, ideally, infinite paths between initial state and outcome. To the degree that you try to make a game more like a story by imposing arbitrary decision points, you make it less like a game.

*Brenda Laurel: I don't think the interactive game changes the popular understanding of what a story is. In popular culture, people talk about characters and worlds in relatively media-independent ways. In common speech, the name "story" actually refers to the central bundle of potential created by characters, worlds, situations, histories, and so forth, rather than to a specific instantiation (for example, *Star Trek*, *Care Bears*, *Myst*).¹*

While both Costikyan and Laurel make compelling points, the question underlying each of their statements is whether or not *games are narratives*. Our position in this schema is that the concept of narrative offers just one way of looking at games. Again, the question is not *if* games are narrative but *how* they are narrative. It is certainly possible to categorize all games as narrative objects—or as non-narrative objects—but as game designers we must ask how can we use such an understanding to generate meaningful play.

Over the last few years, several models regarding games and narrative have emerged. In "Games Telling Stories? A Brief Note on Games and Narratives," Jesper Juul summarizes these trends by identifying three arguments writers and scholars commonly make supporting an intrinsic connection between games and narrative:

1. We use narratives for everything.
2. Most games feature narrative introductions and backstories.
3. Games share some traits with narratives.²

The first argument offers a holistic view: we use narratives to make sense of our lives, to process information, and tell stories about a game we have played. Therefore, no genre or cultural form (including games) falls outside the idea of narrative.

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The second argument centers on the story context provided by a game's opening cinematic or textual introduction. (*You are in a galaxy far, far, away...*) Backstories position a player in the context of a larger story; a player's action in a game is the means by which the larger story is realized. In *Super Breakout*, for example, the backstory written in the program instructions places players within a one-man spaceship, hurtling through the deep blackness of space, faster than the speed of light. The player encounters a mysterious force field, which blocks his way. Can he pass through it or will it destroy him? This text provides a narrative context within which the player acts, blasting away at the force field in order to resume his journey. Without this context, a player's actions in the highly abstract game of *Super Breakout* might lack narrative motivation. Although his actions certainly have interactive meaning—one pixel interacts with another, one action has a discernable and integrated outcome—they lack a designed experiential context within which these more formal meanings are framed as a story.

The third argument, that games share some traits with narratives, is exceedingly broad. This argument holds that games, like narratives, have quest structures, are experienced linearly, offer reversals of fortune, and contain other elements common to some, but not all narratives.

According to Juul, all three of these approaches have been used to justify a narrative approach to understanding games. Directly or indirectly, they all form a part of our own investigation of games as narrative play. However, unlike the approaches Juul summarizes, we are coming to the questions of games and narrative from a game design orientation. In previous chapters, we have framed and re-framed games from many points of view. Seeing games as information, conflict, pleasure, or meaning can help game designers to design meaningful play. The same is true when we look at games as narrative play.

A Framework for "Narrative"

Before we go any further, let's define the key term of this schema, *narrative*. Rather than coming up with our own definition, we borrow one from literary theorist J. Hillis Miller. In his essay "Narrative," he outlines a handful of components that constitute a narrative:

There must be, first of all, an initial situation, a sequence leading to a change or reversal of that situation, and a revelation made possible by the reversal of the situation. Second, there must be some use of personification whereby character is created out of signs—for example, the words on the page in a written narrative, the modulated sounds in the air in an oral narrative. However important plot may be, without personification there can be no storytelling.... Third, there must be some patterning or repetition of key elements.³

Miller's model for understanding narrative contains the following elements:

- **Situation:** A narrative has an initial state, a change in that state, and insight brought about by that change. This process constitutes the *events* of a narrative.
- **Character:** A narrative is not merely a series of events, but a *personification* of events through a medium such as language. Miller doesn't mean character in the usual sense of fictional persona, but rather the process by which "character is created out of signs." This component references narratives as not just events that take place in the world, but as represented events, events that occur via *systems of representation*.
- **Form:** Representation is constituted by *patterning and repetition*. This is true on every level of a narrative, whether it is the material form of the story or its conceptual themes.

Miller goes on to note that "even narratives that do not fit this paradigm draw their meaning from the way they play ironically against our deeply engrained expectations that all narratives are going to be like that."⁴

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How do games relate to Miller's definition of narrative? From a formal perspective, they fit the definition very well. Take Chess, for example. Chess has a beginning state (when it is set up for a game), changes to that state (the game play), and a resulting insight (the outcome). It is a personified representation, a stylized depiction of war, complete with a cast of differentiated characters. The game also takes place in highly patterned structures of time (turns) and space (the checkerboard grid).

Miller's definition of narrative is succinct, but it is also very abstract. All games are narrative by this definition, as is literature, theater, and film. Many other kinds of experiences also fall into the wide net Miller casts, some of them activities or objects we might not normally think of as narrative, such as a marriage ceremony, a meal, or an argument. All contain situation, character, and form of the sort that Miller outlines. (A meal, for example, has a beginning, middle, and end, it comes to pass through systems of culinary representation, and it involves formal patterning on many levels.) The cleverness of Miller's definition lies in the fact that it is so inclusive, while still rigorously defining exactly what a narrative is. Miller's model helps us understand exactly which components of a game come into focus when we consider them from a narrative perspective.

Miller's definition is in some ways a formal approach to narrative. Events, characters, and patterned action describe the qualities of the narrative object, rather than the experience of that object. Because *Games as Narrative Play* falls within our primary schema **PLAY**, our intention is not just to arrive at a formal understanding of narrative (*What are the elements of a story?*) but instead an experiential one (*How do the elements of a story engender a meaningful experience?*). In our schemas based on **PLAY**, our concern is with the experience of players: their internal state of mind, and the relationships they form with each other and with the dynamic system of a game. If we shift Miller's definition of narrative into an experiential framework, we can begin to discuss narrative play in familiar terms. Everything we know so far about the experiential components of games—

that they are complex sensual and psychological systems, that they create meaning through choice-making and metacommunication, that they sculpt and manipulate desire—are tools for crafting narrative experiences.

These experiences emerge from the design of events, actions, and characters. Take our analysis of Centipede, from *Games as the Play of Experience*. The taut interaction between the game's five elements—mushrooms, centipedes, spiders, scorpions, and fleas—provides a formal framework filled with the possibility of narrative play. Each type of creature interacts with the mushrooms in different ways. Accordingly, the personification of each creature's interaction, the way that it becomes a meaningful representation, is based on its designed relationships. Spiders eat mushrooms, for example, whereas scorpions poison them. When shot, the deadly centipede's segments transform into mushrooms, an evolutionary action that changes the state of the creature from *insect* to *landscape*. Although these interactions are formal on one level, players experience them within a narratively descriptive space. How do we design such a space? How can we design game events as narrative events? What kinds of personifications do game actions allow? Next we begin to address these questions by looking in detail at one game, through an experiential application of Miller's framework.

Thunderstorm

We first introduced the dice game Thunderstorm in *Games as Systems of Uncertainty*, where we investigated the dramatic uncertainty created through the game's formal structure. We now look at the game again, this time with an eye toward narrative play. Thunderstorm embodies a very simple narrative. Players await the approach of a thunderstorm. If they play well their houses will be safe from the storm; if not, a powerful bolt of lightning will destroy their homes. Beware the player that fails to roll a 1!

Although Thunderstorm is a game of pure chance, the design of the experience crafts narrative drama on many levels. The experience of the game's "story" is intrinsically structural, tied

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directly to the game *events*. The roll of the dice not only controls the rate at which a player's house is built, but simultaneously the speed at which the storm approaches. As the game progresses, players build their houses step by step. Every time a player rolls a 1, he or she skips house construction that turn, stalling the inevitable approach of the storm. Once the house is built, the drama heightens, as each time a player rolls the dice there is a chance that lightning will strike. The climactic narrative drama is enacted in that final roll, when lightning strikes, destroying the house. The finish could not be more dramatic.

Thunderstorm provides a many-layered narrative experience. Dramatic tension emerges from the varying rates at which players build their houses. At different moments in the game, some players may be "safe" from the storm (at least momentarily!), while others sit poised at the front line of its fury. These positions can change quite quickly, depending on the outcome of the dice rolls as they progress around the circle. Snapshots of the game in progress would reveal constant shifts and adjustments to which house was closest to being built—and thus destroyed.

The translation of a player's performance into a drawing of a house is a distinctly narrative component of the design that makes all of the rich story elements possible. Although the game could have players keep track of their progression in other ways (counting to six, collecting six cards, losing six pennies, etc.), none of these methods would support the story framework of the game nearly as well. By having players draw pictures of the houses that the storm will destroy, the game's design provides a context that grants narrative meaning to the uncertain outcome of the dice roll. The drawn houses *personify* the formal events of the game, in Miller's sense of "character created out of signs." Additionally, players build their houses in full view of everyone else. This use of public information helps to maintain a sense of narrative coherence through shared experience. The drama of one player's experience is ultimately linked with their ability to see how close the storm is to destroying everyone else's house.

The narrative of Thunderstorm also dovetails nicely with the game's structure of pure chance. As players roll and pass dice, they enact a fable about the folly of hubris and the inevitability of fate. As quickly as men and women might build houses—symbols of domestic civilization—nature will inevitably destroy them. Although it is satisfying to slowly build your house, it is at the same time a march toward destruction, a race in which the winners are executed at the finish line. Like the word guessing game Hangman, in which a hanging corpse is drawn line by line with each incorrect guess, completing the image is synonymous with death. The poetic irony of Thunderstorm is that the game's image isn't a negative icon of mortality as in Hangman, but a positive image of construction. In Thunderstorm, the meek player prevails, the most timid builder rewarded for his or her lack of speed, the game ending in the aftermath of the deadly storm, with only one complete or nearly complete house left standing.

The formal patterning that emerges from the core mechanic of Thunderstorm supports narrative experience on both macro- and micro-levels. The moment-to-moment *rhythms* of rolling, drawing, and passing the dice set up *patterns* of events, which are experienced as a story of an approaching storm. As the game progresses and players are eliminated, the circle closes until there is only one house left. The moment-to-moment rhythm of lightning striking individual houses is different every game, but inevitably, as the circle closes, the narrative pace quickens as fewer players remain alive. On a macro-level, the narrative pattern is one of construction and destruction, of movement and stasis. The overall result is a surprisingly rich narrative experience.

Two Structures for Narrative Play

Throughout the rest of this chapter, we extend these formal notions of game interaction into the particularities of narrative game experience. As the example of Thunderstorm makes wonderfully clear, it is the dynamic structures of games, their emergent complexity, their participatory mechanisms, their

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experiential rhythms and patterns, which are the key to understanding how games construct narrative experiences. To understand game narratives, it is essential to analyze game structures and see how they ramify into different forms of narrative play.

We can identify two broad structural rubrics for understanding the narrative components of a game:

- Players can experience a game narrative as a crafted story interactively told: *the characters Jak and Daxter are saving the world.*
- Players can engage with narrative as an emergent experience that happens while the game is played: *Jak and Daxter's story arises through the play of the game.*

Both of these points of view, crafted interactive story versus improvised play experience, place narrative within the context of interactivity. Specifically, these viewpoints represent two ways of understanding how a game system produces narrative. The best terms we have found for these two structural relationships between games and narrative come from a talk by Marc LeBlanc at the 1999 Game Developers Conference. According to LeBlanc, game narratives can be “embedded” or “emergent.”⁵

Embedded narrative is pre-generated narrative content that exists prior to a player's interaction with the game. Designed to provide motivation for the events and actions of the game, players experience embedded narrative as a story context. The narrative of Jak and Daxter saving the world, for example, is a narrative embedded in the game system: it is experienced through player interaction but exists formally apart from it. It is the embedded narrative that gives Jak a reason for collecting Precursor Orbs and Power Cells; without the pre-generated storyline the game would feel like an abstract fetch-the-next-item quest. The embedded narrative also provides the major story arc for the game, structuring a player's interaction and movement through the game world in a meaningful way.

Embedded narrative elements tend to resemble the kinds of narrative experiences that linear media provide. In Jak and Daxter, the embedded elements are the “pre-scripted” moments and structures that are relatively fixed in the game system. Any player, for example, that begins the game for the first time will see the same introductory cinematic. The first time a player encounters the Mayor of Sandover Village, he or she will hear the same prerecorded bit of dialogue. Embedded narrative elements can take a variety of forms and be reached through a variety of means, but regardless of how they are experienced, embedded narrative elements are fixed and predetermined units of narrative content, like text on the page of a Choose-Your-Own-Adventure book.

But not all narrative in games takes the form of pre-generated, embedded content. Narrative can also be *emergent*, which means that it arises from the set of rules governing interaction with the game system. Unlike embedded narrative, emergent narrative elements arise during play from the complex system of the game, often in unexpected ways. Most moment-to-moment narrative play in a game is emergent, as player choice leads to unpredictable narrative experiences. In the section of Misty Island where Jak battles the Balloon Lurkers, the narrative experience does not consist of pre-scripted sequences of dialogue, animation, and camera movements. Instead, the game rules allow the player to hop on a Zoomer to try and defeat the Lurkers and gather resources through skillful maneuvering. The exact narrative experience of a particular game, whether it is Jak easily dispatching the Lurkers, or whether it is a series of crushing defeats that leads to an eventual victory, depends on player interaction.

Emergent narrative is possible because of the way games function as complex systems. As the name implies, emergent narrative is linked directly to our earlier explorations of emergent complexity and meaningful interaction. For example, emergent narrative arises from interactions that are both *coupled* and

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context-dependent. These two terms, which we introduced in *Games as Emergent Systems*, describe interactions between elements in a complex system. When interactions within a complex system are *coupled*, it means that the elements of the system are linked recursively. Like bees in a hive, the elements in the system act together to perform in ways that single elements cannot. A player's moment-to-moment actions as Jak are linked to all other actions taken over the course of the game. Is it time to finally explore that strange-looking island just offshore? Perhaps you should go back to the village, because Jak's health is a bit low. On the other hand, you only need a few more Orbs to unlock the next level. Do you take the risk? How will the story unfold? Because actions in a game are linked to one another, one change in the system can create another change, giving rise to narrative patterns over the entire course of the game.

Interactions in emergent narratives are also *context-dependent*, which means the changes that occur are not the same every time. Instead, the exact outcome of an interaction depends on what else is happening in the system at any given moment. The first time the player fights a Lurker, perhaps it goes badly and the player has to beat a hasty retreat. The player's overall interactive pattern might shift from bold exploration to cautious stealth, the appearance of a Lurker signaling a terrifying threat. Later on in the game, when the player is skilled and powerful, a single Lurker no longer poses a danger: running into one would be a routine or even amusing encounter. Within emergent narratives, coupled interactions produce global patterns across a system; context-dependent interactions ensure that the exact arrangement of these narrative patterns dynamically changes over time.

Both embedded and emergent game elements contain characters, events, and patterns, and so both are narrative by Miller's definition. LeBlanc is not the only game designer to make such a structural distinction and tie it to the design of game narra-

tive. In his article "Formal Abstract Design Tools," Doug Church comes to a similar set of conclusions:

The most obvious uses of story in computer and video games can be found in adventure-game plot lines. In this game category, the story has been written in advance by designers, and players have it revealed to them through interactions with characters, objects, and the world. . . .

But story comes into play in NBA Live, too. There, the story is what happens in the game. Maybe it ends up in overtime for a last-second three-pointer by a star player who hasn't been hitting his shots; maybe it is a total blowout from the beginning and at the end the user gets to put in the benchwarmers for their moment of glory. In either case, the player's actions during play created the story.⁶

Church's two examples closely mirror LeBlanc's categories of embedded and emergent. According to Church, embedded strategies such as those found in adventure games are the "most obvious uses of story in computer and video games." They are more clearly narrative because they more closely resemble what we normally think of as a story experience. As Church puts it, these games contain "plot lines...characters, objects, and the world." But that doesn't mean that emergent narratives, such as in a sports game like NBA Live, can't be just as important in generating narrative experience. Ultimately, the unique narratives games produce come from a balance of both of these approaches.

Embedded elements are narrative structures directly authored by game designers that serve as a frame for interaction. Emergent narrative approaches emphasize the ways that players interact with a game system to produce a narrative experience unique to each player. Some games, such as the classic adventure game *The Secret of Monkey Island*, emphasize embedded, content-based narrative. As Church points out, the structure of

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an adventure game, with its fixed settings and puzzles, lends itself to embedded narrative content that a player unlocks piece by piece over time. Other games, such as *The Sims*, embody a more system-based design approach, in which the game rules represent a space of emergent narrative possibility that plays itself out differently every time.

Virtually every game combines embedded and emergent elements. *The Secret of Monkey Island* is not entirely pre-scripted, like a slide show: there are many routes to take through the game, making for a limited kind of emergent experience. *The Sims*, conversely, has an overall setting that resembles suburban southern California. This pre-generated, embedded narrative frame contextualizes all of the emergent events that happen during play.

A common digital game design approach that combines embedded and emergent narrative elements is a mission-based game structure in which the larger narrative frame is pre-generated but most of the moment-to-moment game outcomes are determined through emergent means. The single-player web game *Spybotics: The Nightfall Incident* uses an overarching cyberpunk narrative that does not change from game to game. However, as a player makes her way through the game story, traveling from node to node on the network, she uses her accumulated inventory of programs to fight “databattles,” the outcomes of which are not determined in advance. The introductory animation, pre-scripted narrative, appearances of characters, and the map of the network itself are all forms of embedded narrative content. However, the way that the player chooses to make her way across the network, the hacker programs she decides to purchase, and the experience of strategically deploying them at each node, represent the emergent elements of the narrative. The total narrative experience of the game includes both embedded and emergent approaches, woven together within a single game structure.

Narrative Goals

Within narrative we order and reorder the givens of experience. We give experience a form and a meaning.

—J. Hillis Miller, “Narrative”

Embedded and emergent structures are useful ways of conceptualizing narrative structures in games. But for narrative play to be fully engaging, it is important to remember the core principles of meaningful play. In the next several sections we take a look at some of the basic elements of games, including goals, conflict, uncertainty, and core mechanics, to see how they can be put to use in the design of narrative play.

One fundamental building block of narrative game design is the *goal* of a game. Goals not only help players judge their progress through a game (how close are they to winning), but also guide players in understanding the significance of their actions within a narrative context. In *Super Breakout*, for example, the goal is to “break out” of the force field by destroying as many colored blocks as possible. The goal describes the nature of player interaction within a narrative context, making the interaction meaningful. The outcome of the interaction is clear on a formal level (blocks are destroyed) as well as on a narrative level (the space ship breaks through the force field!). In this example we see again how embedded narrative can provide a framework that makes the more immediate game play narratively meaningful.

In addition to the embedded narrative arc of the game, narrative play can occur on the moment-to-moment, emergent level as well. In the Hostage Rescue mode of multiplayer *Counter-Strike*, players compete in teams as either counter-terrorists or terrorists. Each team has complementary goals: to find and rescue the hostages or keep them from being rescued, over a series of rounds. The larger narrative arc of the game swings in tempo with the success or failure of each round, as one of the teams emerges as victor. But narrative is also experienced each moment of the game, as players make decisions regarding their interaction with teammates and opponents. Where are

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the hostages hidden? Why are the terrorists so unorganized? Can you count on your teammate to cover you as you sneak into enemy territory? With half your team down, will you be able to rescue enough of the hostages to beat the terrorists? Counter-Strike players constantly interact with one another through the narrative frame of counter-terrorist military operations. The collaboration and competition of the game experience, defined by the intertwined goals of each team, shape moment-to-moment player behavior and narrative experience.

Level or mission-based structures in games also provide important narrative goals for players. Completing a level means not only reaching an objective, but also passing through one episode of a larger story. As the player moves through multiple levels, the succession of completed goals creates narrative coherence. Game levels offer players access to specific areas of the narrative world, each level populated by unique events, objects, and characters that create a particular narrative tone and texture. *Spybotics: The Nightfall Incident* proceeds as a series of levels, in the form of network nodes that the player must defeat. The enemy programs at each level increase in difficulty, as do the abilities of the hacker programs under the player's control. More than just ramping up challenge, these new game elements enlarge the emergent narrative possibilities. As a result, the player's expanding palette of strategic actions corresponds with an expanding palette of narrative experience. Each successfully completed node rewards the player with messages and updates from the game's cast of characters; as the play unfolds, the level structure also drives the embedded cyberpunk storyline of espionage, sabotage, and betrayal.

The Sims Hot Date Expansion Pack uses both levels and goals to shape the game's narrative. Going on a date is a narrative experience composed of several smaller events. A romantic date has several distinct components:

- *Getting ready to secure a date:* A player must prepare her Sim by making sure that the Sim has adequate Energy and

that her Sim's Motive values are at their maximum. Mood, an aggregate of all Motive scores, plays a big role in the duration of the date and the success of each interaction during a date. Because a date's overall success is entirely based upon the sum of interactions between Sims, a large number of bad interactions results in an unsuccessful date.

- *Getting a date:* A Sim can get a date by asking one of her housemates, accosting a visitor, calling a friend or acquaintance, or by randomly meeting someone downtown. Whether a Sim accepts the proposal of a date from another Sim depends on a Relationship score, which develops through social interactions. Sims can joke, flirt, apologize, tease, and scare each other in an attempt to accomplish the goal of getting a date.

- *Sharing one or more activities:* A date consists of a set of carefully considered interactions and events, designed by the player to maximize the Relationship score of the two Sims. A poorly designed set of events will inevitably lead to bad interactions—and a bad date. A rejected kiss at the bar, for example, immediately ends a date. Each kind of event players choose to include in their date has its own set of narrative expectations. Trying on clothes in a store, for instance, offers a very different narrative experience than a dip in the hot tub!

- *Going home together (optional):* The ultimate end to a date is to get a Sim to come home for some shenanigans on the Love Seat or in the Love Tub. In order for this to occur, however, a player must carefully manage Energy resources as well as maintain a high Relationship score throughout the date. Achieving this goal affords clear narrative resolution.

- *Saying goodbye:* If the date goes well, a Sim might invite a date to move in, or even to get married. With either of these outcomes, the new Sim becomes a member of the household. There is also the possibility that the date will end badly, meaning that the Sim's Relationship score has

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Sims Hot Date



bottomed out. The player has some choice in defining his or her own goals for a date, but the final outcome is determined by the events and interactions that have taken place up to that point, and are emergently generated. This concluding step in the larger narrative event of the romantic date provides a snapshot of the overall experience, giving the player a sense of narrative closure.

Level or mission structures allow players to feel the details of a story while the game designer maintains control of the larger narrative experience. A game's goal, or series of goals, is part of the narrative context that makes up the game. When goals are well-designed to support narrative play, a player's interaction with the game world becomes consistently meaningful. As usual, the discernability and integration of meaningful play is critical. The elaborate multi-step process of going on a Sims date is only meaningful because of the complex system that supports and links player actions. If every date ended the same way no matter what actions the player took, there would be no reason for the player to engage deeply in the decision-making process. Because each step of the process plays a role in determining the outcome, the experience of a Sims date provides genuinely meaningful narrative play.

Conflict

Goals in a game are never easy to achieve. As players struggle toward the goal, *conflict* arises. Game conflict provides both opportunity for narrative events and a narrative context that frames the obstacles a player must overcome. Players in a game of *Thunderstorm* must overcome the obstacle of failing to roll a 1 in order to stave off the approaching storm. In the rhythm-action console game *Um Jammer Lammy*, players must overcome the obstacles of challenging rhythmic structures and hair-raising slapstick adventures to make sure Lammy makes it to her rock-n-roll gig on time. Overcoming conflict in a game is one way narrative events advance.

Because conflict presumes a struggle between opposing forces, in a game there should always be some element that works against player success, an element that acts to try and ensure the failure of the player. This role is often taken by a villain character, a competing player or team, or may be embodied in the game system as a whole. From a narrative perspective, this element motivates and contextualizes player action. It does not make much narrative sense to knock down rows of colored blocks if the behavior of those blocks has no connection to your presence in the game world. Once you identify those colored blocks as a force field designed by the forces of evil to stop your advance through the universe, you are much more motivated to enter into a conflict with them. Your action becomes meaningful within the narrative frame of the game. In traditional storytelling, the internal conflict of a character often shapes the kinds of experiences encountered by the audience. Internal conflict reveals a character's vulnerability, which is usually exploited by those who wish to see the character fail. Lex Luthor knows Superman is vulnerable to kryptonite and in love with Lois Lane. The trick to using game conflict as a narrative game design tool is to tie it closely to the formal game structure itself.

In the strategy board game *Settlers of Catan*, the narrative premise is that the players are competing to colonize a small island, establishing their own networks of roads, settlements, and resources. Players can trade resources with each other, and

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conflict quickly arises out of the tension between diplomacy and self-interest. Every trade you complete helps you, but it also helps the opponent with whom you traded. If you drive too hard a bargain, no one will trade with you, which means you won't be able to acquire the resources you need to prosper: *You need a Brick resource to build that next stretch of road and connect your settlements, but the only player willing to trade with you is about to win—what action do you take?* In *Settlers of Catan*, narrative conflict, social conflict, and strategic conflict are tightly intertwined. As you make strategic decisions, you are building social relationships, which themselves have narrative implications for the emerging story of the game.

The conflict of a game infuses every moment of its play. To maximize the narrative play in your game, you must pay close attention to how the conflict in your game is narrativized. When game conflict provides a narrative context for action, your players will help you tell your game's story, infusing their own actions with narrative meaning. Even in a relatively abstract game like *Settlers of Catan*, the conflict provides a narrative space where players can flesh out the game's story and take on narrative roles. In our own experience with the game, slang terms such as "Mountain King," "Road Baron," and "General" emerged to describe play strategies focused on controlling mountain resources, building long roads, and constructing a large army. This is transformative narrative play: a game conflict enriched by a narrative level of meaning that emerges from the social, strategic, and representational structures of the game. We are not saying that players engage with *Settlers of Catan* in order to role-play fictional characters. But narrative play is clearly part of the game's appeal. Without its narrative framework, designed to function in concert with the game conflict, *Settlers of Catan* would feel like an exercise in number shuffling.

Uncertainty

Uncertainty is another requisite quality of meaningful play. If a game is certain, if the outcome is known in advance, there is no reason to play in the first place. But uncertainty is also a narra-

tive concept, for the element of the unknown infuses a game with dramatic tension. In *Thunderstorm*, the narrative of the approaching storm is only complete once the storm has destroyed every house but one. If it were known in advance which player would win, there would be no real need for a narrative device. In *The Drome Racing Challenge*, an online multiplayer racing game, players customize racing cars and prepare a racing strategy, then select an opponent online and race. During a race, players do not directly control their cars, but instead watch their preparations play out as an Animé-style animation that depicts each moment of the race, event by event. The fact that players do not know the result of the race until the animation has played out makes viewing the race highly dramatic. Despite the fact that a player might have the utmost confidence in his or her race strategy, there is always the chance to lose.

The dramatic tension of *Poker*, too, gains its bite from the uncertainty of outcome. Bluffing contributes to the narrativity of the experience, heightening the potential for deceit. As players enter into the psychological space of the bluff, narrative tensions mount. *Does she really have the hand she says she has, or is she bluffing? What if she isn't bluffing? Can she still be beaten? He just made a large bet, so he must have a good hand. But he bluffed last round, and he wouldn't try that same trick twice in a row. But maybe that's what he wants me to think....* The mechanics of betting heighten the feeling of uncertainty. Players with strong hands wage higher bets against uncertain outcomes, whereas players may limit bets when the degree of uncertainty in a game feels too great. As players fold and the circle of active players shrinks, narrative tension grows. Although players may have good hands, the outcome remains uncertain until all bets are made and the cards are called. This moment can be quite dramatic, particularly when a hand has been well-played.

Even in role-playing games, which often lack a final game outcome, the uncertainty of each action, each encounter, and each adventure plays a crucial role in building narrative engage-

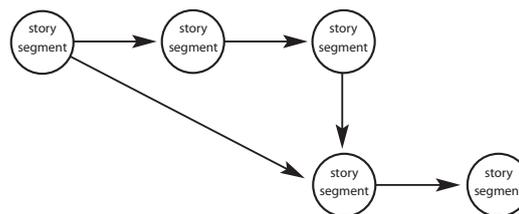
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ment. Experienced tabletop role-players will shun game masters with reputations for being too easy or too hard. In these cases, certain death or certain success removes the enjoyable uncertainty of the game. On the other hand, when role-players feel like they are truly uncovering mysteries and exploring strange new areas of their worlds, powerful narrative play can result. As with the use of conflict, successful use of uncertainty in a game story ties the narrative elements to the formal system of the game. Do you dare explore the dank dark cave, with its legends of horrible monsters and priceless treasures? Should you first consult the oracle at the top of the mountain for advice, risking starvation during the long journey? Do you spend your last few gold coins hiring a few extra guards to accompany you? Each of these choices involves not just dramatic narrative outcomes, but different uses of the role-players' limited resources. As players make a choice and its uncertain outcomes slowly unfold, new choices present themselves, each emerging option cloaked in its own narrative uncertainty.

Core Mechanics

Whereas uncertainty tends to affect the larger trajectory of a game's narrative arc, *core mechanics* represent the essential moment-to-moment activity of players. During a game, core mechanics create patterns of repeated behavior, the experiential building blocks of play. Designing moment-to-moment play as narrative play means paying attention to exactly what players are doing in your game, how their choices and outcomes are represented, and how these moments fit into larger narrative frames.

Recognizing games as narrative experience means considering them not just as bits of plot that are arranged and rearranged through interaction, but instead considering them as an ongoing *activity* in which a player engages with a core mechanic to make meaningful choices and explore a space of possibility. Often, interactive narratives are diagrammed as points connected to lines, with each point representing a piece of text or a segment of video that is accessed by the player.



What this kind of formal approach to interactive narrative leaves out is *how* a player moves from point to point in the system. This is where the core mechanic comes into play. In designing games, you aren't simply creating content. You are creating a set of actions, a series of stylized behaviors. What are your players *actually doing* from moment to moment in a game? More importantly, how can you craft these core mechanics to most effectively embody the narrative experience you have in mind? A number of examples follow.

In the unusual virtual creature game *Seaman*, the player interacts with the title character Seaman by talking into a microphone that attaches to the Dreamcast controller, enacting a wonderfully conversational style of play that literally involves speaking, looking, and listening. Because the game's story casts the player as a scientist observing and interacting with a strange form of life evolving in a fishtank, these core mechanics are entirely appropriate to the narrative of the game. Even when the player is using the controller buttons to take action, the game design creates evocative mechanics of interaction. Grabbing Seaman and lifting him up out of the virtual fish tank is accomplished by a slightly awkward, single-handed button combination that creates a hand gesture very much like grabbing a fish with your forefinger and thumb. The core mechanics of *Seaman* not only let the player access new content, but actually force the player to *perform* the narrative of the game from moment to moment.

The default rules for *Mind's Eye Theater*, the live-action version of the role-playing game *Vampire: The Masquerade*, resolve actions by means of Rock-Paper-Scissors. Although this system

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is convenient for the real-world context of a LARP (where it would be awkward and time-consuming to pull out dice and scoresheets to resolve every conflict), many role-playing groups have opted for different resolution mechanics better suited to the narrative content. For example, some player groups simply translate rock, paper, scissors into more appropriate content (devil, angel, human); instead of using hand signals, they use sets of elaborately designed custom cards. Flashing an image of a devil before your opponent in order to resolve a psychic attack suits the dark Goth narrative of Vampire much more than making the schoolyard gesture of scissors. This game design solution keeps the formal system of Rock-Paper-Scissors completely intact, while modifying the experiential component of the core mechanic for dramatic narrative effect.

Narrative Space

The last several sections of this chapter have utilized fundamental game concepts, reframing them in narrative terms to shed light on the intersection of game design and storytelling. Goals, conflict, uncertainty, and the core mechanic are all general elements of games that game designers can use to craft meaningful narrative experiences. Another familiar game concept that we can understand narratively is the *space of possibility*. Game designer Warren Spector connects this concept to narrative when he states that “games create ‘possibility spaces,’ spaces that provide compelling problems within an overarching narrative, afford creative opportunities for dealing with these problems and then respond to player choices with meaningful consequences.”⁷ Spector’s description of a game’s “possibility space” links the embedded “overarching narrative” of a game to the emergent actions and outcomes of moment-to-moment play.

So far in this book, we have invoked the space of possibility metaphorically, to mean an abstract decision-space or a conceptual space of possible meaning. But what if we consider the space of possibility *literally*—as an actual 2D or 3D space in which a game takes place. In other words, one way to think of

the space of possibility is as an actual narrative *place*. In Berzerk, the space of the game consists of a series of connected rooms, seen from a bird’s eye view. The checkerboard pattern of a Chess board mathematically slices the space of the game into discrete modules of equal dimension, whereas the elegant grid of the Go board uses the intersection of points to describe the territory of play. In Super Mario 64, the three-dimensional space of the game is composed of concealed rooms, magical trapdoors, and secret worlds that create a vast landscape of mysterious hidden places.

The spatial features of a game have a strong impact on creating the narrative space of possibility. As game scholars Henry Jenkins and Kurt Squire explain,

Game designers use spatial elements to set the initial terms for the player’s experiences. Information essential to the story is embedded in objects such as books, carved runes or weapons. Artifacts such as jewels may embody friendship or rivalries or may become magical sources of the player’s power. The game space is organized so that paths through the game world guide or constrain action, making sure we encounter characters or situations critical to the narrative.⁸

Volleyball, for example, takes place within a court 60 ft x 30 ft, divided in the center by a net 8 ft high. The only objects that exist in this space are players—six to a side—and a ball. The game play emerges from the interactions made possible by the players’ positions within the spatial grid. Players occupy designated spatial positions on the court which guide and constrain player action. How and when players touch the ball, for example, is a product of their positions within the grid. The net that divides the court engages narrative play as well, for it articulates the space of friend and foe, of teammate and opponent. Across this net, dramatic narratives of attack and defense occur each time a player serves the ball.

The organization of spatial features in a game is critical to the design of a game’s narrative space of possibility. If you want

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Case Study: A Loopy Core Mechanic

In LOOP, the player uses the mouse to draw lines and capture butterflies moving about the screen. The formal core mechanic, drawing lines around shapes, is framed as a narrative act (catching butterflies) with which players take action in the game world. In LOOP, there is a strong fit between core mechanic and game narrative. The looping action of drawing lines with a mouse metaphorically evokes the swooping gesture of catching butterflies with a net. One could imagine an abstract version of LOOP as a game without butterflies, in which the player is simply drawing lines around colored geometric shapes—but the framing of the player's action as butterfly catching adds layers of narrative meaning to the core mechanic, creating a story context that incorporates other aspects of the game as well.

Each level in LOOP gives the player a limited amount of time to catch a certain quota of butterflies, or else the game ends. LOOP communicates this time limit by the condensed representation of a single day: the rising and setting of the sun. This narrative device ties the core mechanic of the game to an episodic structure. A clock, hourglass, or even just numbers counting down could have been used to mark the passing of time, but these design solutions do not complement the narrative context of the game. Each “day,” players have a chance to collect more butterflies. Once the sun sets, providing that players have managed to catch enough butterflies, the colorful insects disappear until the dawn of another day when it is time to catch some more. As the level of difficulty steadily increases, the dramatic tension is heightened. Because of the intense concentration required to collect as many of the increasingly agile butterflies as possible, the sun seems to set faster and faster with each passing day. It doesn't of course—it only feels that way!

Every five levels, a player has a chance to catch a special butterfly and reach a bonus level. These levels are set at nighttime and feature a rising moon as a timer instead of a setting sun. Bonus levels do not have a quota of butterflies to catch and therefore provide a more relaxed context for the core mechanic within the overall rhythm of the game. These nighttime levels reframe the core mechanic in a narrative context opposite to that of the daytime levels. In this way, the narrative framing works hand in hand with the formal game structure to maximize narrative meaning from the simple core mechanic.

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your players to form strong social relations, make sure to create narrative spaces that support social interaction. The spatial design of a house or restaurant in *The Sims* defines the type of social interactions that can occur there. If a player designs a bar that doesn't allow the bartender access to the cash register, no drinks can be served. Without the action > outcome of ordering and serving drinks, a slew of narrative interactions fail to materialize. In *Black & White*, the spatial features of the game world change in relation to the actions of a player, placing the consequences of player action in a narrative of moral choice. The world at the beginning of the game is an image of Edenic innocence. As a player moves through the world, taking actions and making choices, the world changes to reflect the moral nature of these choices. "Bad" choices darken and scar the world, whereas "good" choices transform it into a flowering garden. The story of good and evil is metaphorically both reflected and enacted within the spatial features of the game world. Even the way that the player moves through the world of *Black & White*, by "grabbing" it with the game's hand-cursor and pulling it into view, emphasizes the unusually intrinsic connection between the player and the space of *Black & White*.

What about a game that has no predefined physical space? *Mafia* is a social game of secret identities and clever bluffing in which players sit in a circle and take turns voting which among them are the secretly designated killers. There is no game board or physical materials, and playing the game does not require a specific kind of space. Yet the loose arrangement of players in a circle creates a spatial order that maximizes narrative interaction. Players must be able to see each other clearly, in order to scrutinize body language and make guesses about who might be the hidden members of the Mafia. The spatial configuration of players is critical to the system of public and private information at the center of the game. A player out of sight would be able to avoid scrutiny from the others. Instead, the democratic arrangement of players ensures that everyone playing is both observer and observed, equally culpable and suspect.

The play activity of *Telephone* shares a similar spatial design, but a very different set of narrative interactions. Players of *Telephone* sit in a tight circle (the tighter the better) in order to facilitate whispering into a neighboring player's ear. Although this formal interaction could occur in another spatial configuration (such as a line), the game would lose its essential narrative of circulation—of watching the message travel through a physical and social space that stretches from a starting point, through the bodies of the players, to arrive at its final destination in the ear of the last player. The spatial arrangement of the players in a circle, although not a formal requirement of the game, enriches the narrative quality of the play experience by teasing out the game's inherent story of the same-but-different transformation of information.

What are the implications for design? Pay careful attention to the way that your game creates and organizes space. What kind of seating arrangement does the design of your board game imply? Will players be able to hold the cards they need to keep hidden or will they have to improvise screens that limit social interaction? How do the two teams first approach each other on the field of play? Does the way your game breaks up the classroom space imply narrative ownership of territory? Does the structure of the space between two dueling card players express the magical territory where their epic battle takes place? In every game you create, consider how the design of the space weaves together formal and experiential elements to represent and facilitate the stories you want to tell.

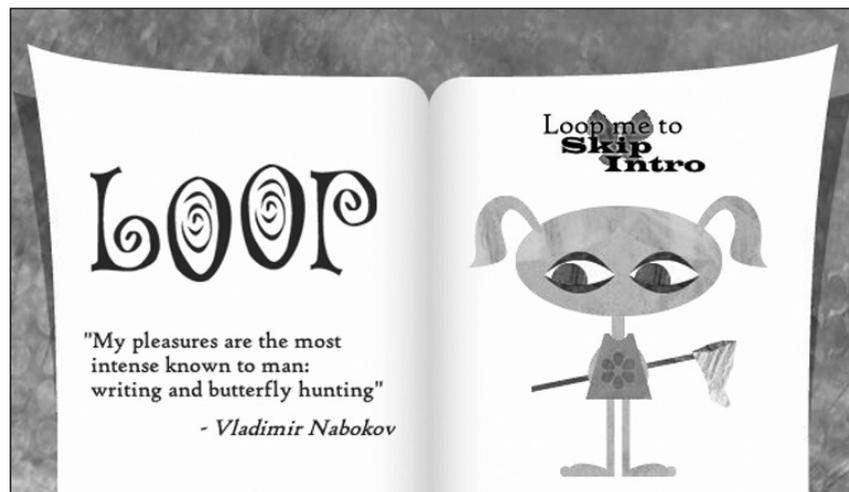
Digital Game Spaces

Although games have been played in real-world spaces for millennia, the appearance of electronic and digital games in the last few decades have provided new kinds of game spaces: playgrounds that exist only on the screens of computer monitors and televisions. These game spaces take a multitude of forms, from blocky 2D grids to expansive 3D worlds. One useful taxonomy for describing the range of these digital spaces comes from Mark J. P. Wolf, in his essay "Space in the Video

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LOOP

The patterns of behavior created through the core mechanic of LOOP support narrative play in a number of ways: by situating play within a repeating framework of a day, by linking the formal interaction of looping to the narrative context of butterfly catching, and by creating numerous levels of choice, from the number and kind of butterflies captured within a single loop to the pace at which the collecting occurs. In addition to the elements of narrative play tied to the core mechanic, there are a number of embedded narrative components as well. These include the butterfly-catching main character Ada; her procedurally generated dream poems that appear on bonus levels; and the visual motif of a book that links the act of butterfly catching to writing and storytelling. These narrative contexts add yet more meaning to the player's interaction, forming an overall system of play that results in an experience full of narrative possibility.



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Game.” Wolf lists eleven ways that video games operate to structure and represent space. We paraphrase these categories below, with examples from Wolf’s essay:

- *Text-only space*: text adventure games such as Zork and Planetfall
- *One contained screen*: Pong, Space Invaders, Breakout
- *One screen with wraparound*: Asteroids, Pac-Man (with teleporter wraparound)
- *Scrolling on one axis*: Defender, Atari’s Football arcade game
- *Scrolling on two axes*: Gauntlet, Sim City
- *Adjacent spaces displayed one room at a time*: Berzerk, Atari’s Adventure
- *Scrolling with separate background layers*: Zaxxon, Double Dragon
- *Limited 3D space*: Tempest, Night Driver
- *Two spaces on one screen or two separate screens*: Spy vs. Spy, Dactyl Nightmare
- *Full 3D spaces*: Battlezone, DOOM, Tomb Raider
- *“Mapped” Spaces*: Defender, Myst (both have a separate radar or map display)⁹

Wolf’s categories are not without some conceptual problems. For example, there is a fundamental difference between a “two-and-a-half” dimensional space like DOOM and a more fully 3D space like Tomb Raider (in DOOM the player can only move in two dimensions and the objects are completely flat). Additionally, some of his categories, such as separate background scrolling layers and “mapped” spaces, seem to be fuzzier designations (most of the categories he lists could also incorporate a “map” element). Wolf’s typology is certainly not the only way to conceptualize digital game spaces, but his categories are useful in pointing out the wealth of forms they take.

Zork: Text-only space

Kitchen	Score: 10/5
<pre>>enter Kitchen You are in the kitchen of the white house. A table seems to have been used recently for the preparation of food. A passage leads to the west and a dark staircase can be seen leading upward. A dark chimney leads down and to the east is a small window which is open. On the table is an elongated brown sack, smelling of hot peppers. A bottle is sitting on the table. The glass bottle contains: A quantity of water >drink water You have to be holding the glass bottle first. ></pre>	

The structure of a digital game space always grows directly from the formal system that defines the game. However, the space that a player experiences is also a function of representation (how the space is displayed to the player) and interaction (how a player navigates through the space). These three elements—formal structure, structure of display, and interactive structure—together constitute the experience of a digital game space. All three of them need to be designed in concert to achieve proper narrative effect in your game.

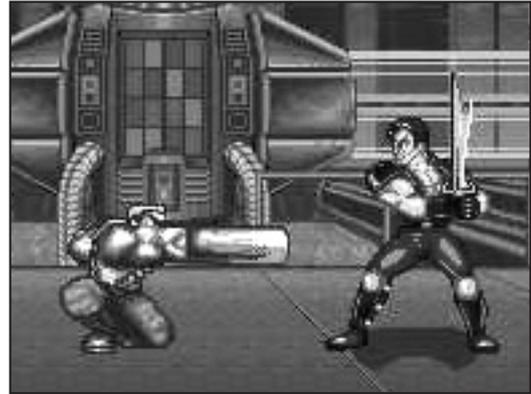
For example, the feeling of zero-G drift in Asteroids is linked directly to the design of the game space. Rather than bouncing off the screen wall like a Pong ball, the player’s ship moves right on through to the other side, evoking the illusion of endless movement through the darkness of space. The game’s style of movement, emphasizing inertial drift and retro-rocket maneuvers, also heightens the feeling of space travel. Although the player’s ship never leaves the screen, at the beginning of each wave, asteroids drift in from the edges. Once they appear, these asteroids follow the same wraparound logic as the player’s ship. Other objects, such as the UFO saucers, don’t ever wrap around, and simply disappear once they reach the edge of the screen. Curiously, these inconsistencies never break the game’s spatial continuity. The fact that some objects remain constantly on screen (the player’s ship and existing asteroids) whereas others

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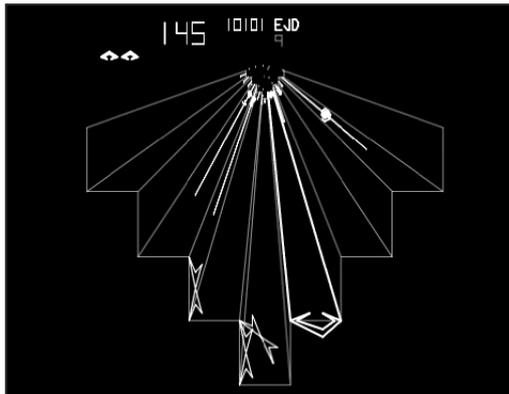
Asteroids: One screen with wraparound



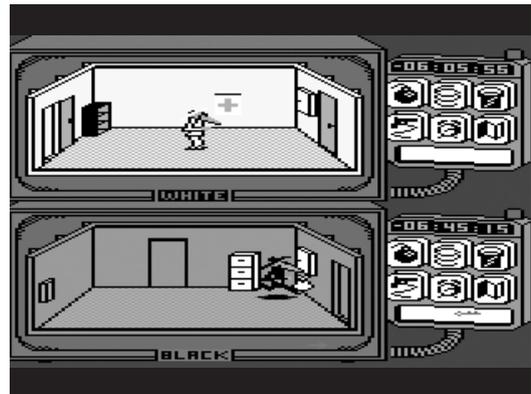
Double Dragon: Scrolling with separate background layers



Tempest: Limited 3D space



Spy vs. Spy: Two spaces on one screen



Tomb Raider: Full 3D space



Defender: "Mapped" space



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seem to drift in from parts unknown (new asteroids and UFOs), adds up to a rich and multi-layered narrative of cosmic exploration and survival. Space creates narrative in all senses of Miller's definition: space helps define the "characters" (the game objects); space is the context in which narrative events occur; and space patterns narrative experience over time for the player.

The design of a game space creates a context for narrative interaction, by structuring events in patterns of space, time, and causality. As Marsha Kinder notes in *Playing with Power in Movies, Television, and Video Games*, "Narrative creates a context for interpreting all perceptions. Narrative maps the world and its inhabitants, including one's own position within that grid."¹⁰ The narrative play of games is always connected to an underlying grid of possibility, to goals and conflict, to uncertainty and the moment-to-moment action of the core mechanic. The space of a game is quite literally its space of play.

In a fighting game such as Tekken, the space is tightly constrained, crowding the two fighters up against each other. There is nowhere to run and nowhere to hide. All you can do is fight your opponent, an action the design of the space explicitly encourages and facilitates. In contrast, the corridors and rooms of a Quake deathmatch space create a narrative of stealthy maneuvers, mad dashes to grab power-ups, and the surprise of sudden death. Tekken has no hidden spatial information. But in Quake, walls block players from seeing each other, dark lighting makes hiding in shadows possible, and the periodically appearing power-ups create uncertainty about when and where they can be found. In both Tekken and Quake, a player's "position on the grid," as Kinder puts it, is simultaneously a location in the space of the game and a position within the space of the game narrative. The formal, represented, and interactive spaces of games are also narrative spaces, contexts for interpreting the experience of a game as a story.

When we frame experience as narrative, the events and actions of game play take on form and meaning within the game's representational universe. The dynamic properties of the space of Tekken and Quake are important in creating emergent narratives of conflict. But the spaces contain embedded narrative qualities as well. In Quake, the spaces embody the sets, props, and characters of pulp sci-fi horror. In Tekken, as with most fighting games, each arena is thematically linked to one of the game's characters. Space can therefore be used to express information about a character's persona or backstory, or to create narratives about defending one's home turf or invading an enemy's territory.

Spaces of Adventure

One of the wonderful qualities of digital game spaces is their plasticity and flexibility. The emphasis in recent years on photo-realistic, logically consistent 3D game spaces has eschewed experimental approaches to space design in favor of increasingly "realistic" ones. Yet by exploiting the flexibility of the computer medium, space can be a powerful narrative tool. For example, take the Atari 2600 game Adventure, arguably the first graphical adventure game. Let's begin by looking at the backstory of Adventure from the game manual:

An evil magician has stolen the Enchanted Chalice and has hidden it somewhere in the Kingdom. The object of the game is to rescue the Enchanted Chalice and place it inside the Golden Castle where it belongs.

This is no easy task, as the Evil Magician has created three Dragons to hinder you in your quest for the Golden Chalice. There is Yorgie, the Yellow Dragon, who is just plain mean; there is Grundle, the Green Dragon, who is mean and ferocious; and there is Rhindle, the Red Dragon, who is the most ferocious of all. Rhindle is also the fastest Dragon and is the most difficult to outmaneuver.

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There are three castles in the Kingdom; the White Castle, the Black Castle, and the Golden Castle. Each castle has a Gate over the entrance. The Gate can be opened with the corresponding colored Key. Inside each Castle are rooms (or dungeons, depending at which Skill Level you are playing).

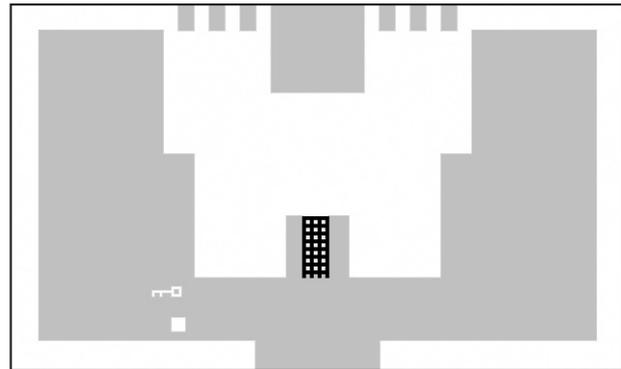
The Castles are separated by rooms, pathways, and labyrinths. Common to all the Skill Levels is the Blue Labyrinth through which you must find your way to the Black Castle. Skill Levels 2 and 3 have a more complicated Kingdom...¹¹

This embedded narrative weaves together traditional elements of character, setting, and conflict (Evil Magician, Kingdom, and hidden treasure) with explicit descriptions of the spatial mechanics of the game (keys open gates, castles are connected by pathways and labyrinths, higher skill levels have more complex kingdoms). This introductory description even makes explicit the ways that spatial arrangements acquire narrative meaning. For example, according to the text, what is it that makes Rhindle the Red Dragon the most ferocious dragon of them all? It is his ability to move through space more quickly than the others.

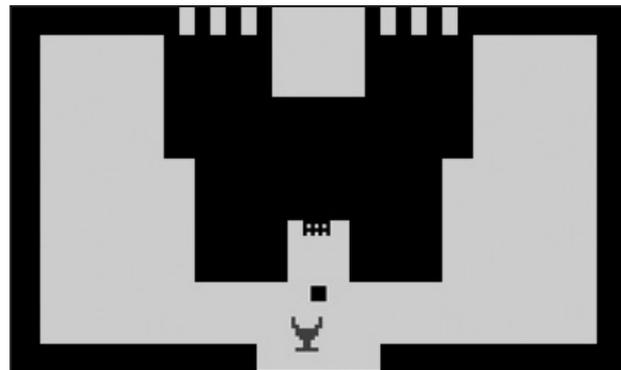
Within *Adventure*, the player is represented as a square dot that moves through the space of the game, collecting and using objects, avoiding enemies, and navigating the kingdom in order to find the hidden chalice. As Wolf pointed out in his taxonomy of game spaces, *Adventure* represents space as a series of interconnected adjacent rooms, each room displayed one at a time. When a player enters a new room, the player's dot appears on a point at the edge of the screen corresponding to the entrance of the room. If the player uses an exit to leave the room, a new room fills the screen. As opposed to a more contemporary, smoothly scrolling space, *Adventure*'s spatial scheme designates each room as a kind of theatrical tableau, a self-contained scene that focuses the dramatic action. This elegantly spare structure, imposed in part by technological limitations, nevertheless perfectly suits the mythical fairytale narrative of the game. For example, when a player enters a room with a locked castle gate, movement is severely

restricted to the lower and side borders of the screen, clearly evoking the experience of being locked out. On the other hand, when the proper key opens the gate, a simple but dramatic animation of the raising castle portcullis transforms the space of the castle from imposing barrier to inviting gateway, leading to new spaces beyond.

closed castle



open castle



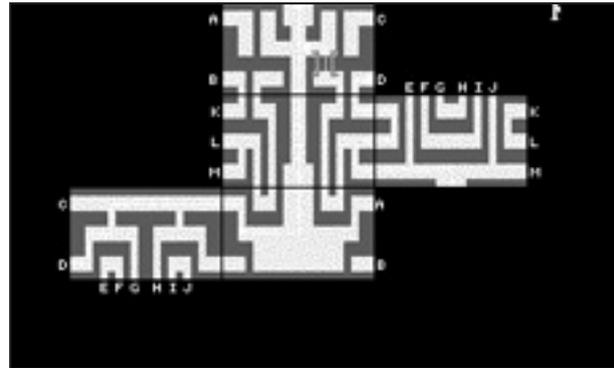
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Much of Adventure's delightful use of space comes from its inconsistencies. The room one reaches inside a castle, for example, is larger than the castle appears from the outside. This illogical use of space expresses the magical nature of the game narrative and reaches true virtuosity in the construction of the game's four labyrinths. As suits the creation of a mad Evil Magician, these mazes do not follow a consistent topography. The labyrinths all exist as a series of self-contained rooms with passageways. However, entrances and exits from the rooms do not follow a consistent spatial logic but instead wrap around in erratic ways. The image to the right shows a map of the Blue Labyrinth, along with indications of the wraparound entrances and exits from each room.

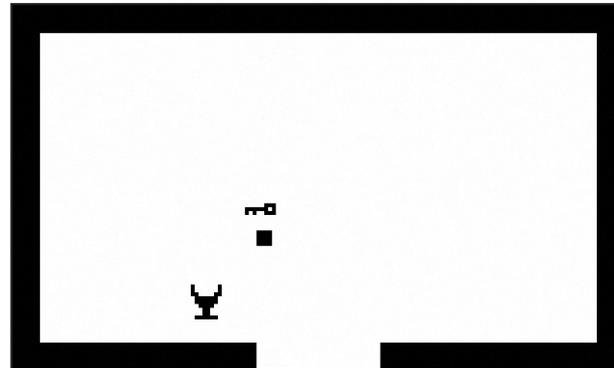
The experience of navigating these mazes can be initially disconcerting, especially because some of them are darkened "catacombs," where you only see the walls in a limited area immediately surrounding your dot. It is possible in these mazes to feel completely and utterly lost—a wonderfully appropriate emergent narrative effect. Yet at the same time, the labyrinths are not gratuitously complex, containing only three, four, or five rooms. The difficulty of moving through them comes from their magical wraparound logic, not from an overabundance of navigational choices. This is a well-designed, balanced spatial challenge. The player never loses a strong sense of the overall system, and over the course of playing several games, learns to navigate the mazes with greater and greater ease.

More than in most games, the formal, representational, and interactive qualities of Adventure's spaces contribute directly to the game's rich narrative experience. You finally locate the Black Key in the Catacombs and you race through a labyrinth toward the locked Black Castle. But then you come across Rhindle, the Red Dragon! Can you squeeze by Rhindle, or will you end up trapped in the narrow corridors of the maze? You can only carry one object at a time, and you dropped the Sword when you

Blue Labyrinth (expanded view)



Inside the Black Castle



found the Black Key. With the Sword, you could slay Rhindle. But can you remember exactly where it is? You better decide quickly, because Rhindle is rapidly approaching! These emergent narratives are ensconced within the larger fairytale context of the game, and are made possible by the way that the simple yet structurally intricate space of Adventure frames and enables game action. The formal game elements become narratively meaningful within the story context that the game provides.

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Narrative Descriptors

On a black screen there's nothing but white Rorschach-shaped outlines moving around, and you're to hit them, so to speak, before they hit you. Once you've figured out what "you" is. The name on the machine implies you're in a field of asteroids, not that you know what a field of asteroids is, or what it'd be like to be a being in one.—

David Sudnow, *Pilgrim in the Microworld*

We will return presently to the narrative play of digital games. But first we must pause to identify a key storytelling element: *narrative descriptors*. Narrative descriptors are representations, which means that they are depictions of one or more aspects of the game world. Games offer players narrative descriptors on many levels. Graphics on the side of arcade cabinets depict objects or characters that will appear in the game world. Game manual text explains many aspects of a game experience, from the interactive controls to plot and backstory. Audio soundtracks help establish and embellish the narrative setting, while opening cinematics tell us what the game world looks like and why we are there. Even within game play, graphical elements and sound effects communicate the narrative identity of game objects and characters. Each type of narrative descriptor plays a different storytelling role in explicating the game universe, creating a narrative context for events and actions.

Everything in a game is potentially a kind of narrative descriptor. Thinking in terms of narrative descriptors means framing the elements inside and outside of a game as objects that communicate the story. As players, we rely on narrative description to help us make sense of the settings, events, and characters encountered. Although narrative descriptors bear some relation to the formal structure of a game, they are somewhat separable from it. The very same game can be depicted in different ways by different narrative descriptors. For example, *Breakout* has been narrativized in a number of ways. The original arcade game had pictures of escaping prisoners on the game cabinet, telling the story of a jailbreak. In this case, the layers of blocks on

the screen represent the walls of the prison from which the prisoner is attempting to “break out.” The first Atari 2600 version of *Breakout* framed the narrative as a Pong-style Tennis match: the box cover featured stylish illustrations of Tennis players. The sequel *Super Breakout* moved into the realm of science fiction, a lone spaceship facing off against a mysterious force field.

Although the core formal structure of *Breakout* remained the same in each of these three variations, the framing narrative changed radically. But don't get the wrong impression: this doesn't mean that any narrative can be applied to any game. In the case of *Breakout*, the abstract quality of the game graphics and sound lent themselves more easily to multiple narrative interpretations. Furthermore, each of the three narrative frameworks (jailbreak, Tennis match, force field) bore a genuine relationship to the actual game play, although each narrative emphasized different aspects of the game structure and interaction.

It is interesting to note that narrative descriptors are not always effective in creating a clear context for interaction. In *Super Breakout*, for example, the written narrative in the game manual is actually somewhat confusing. We quoted it at the beginning of this chapter, but below is a short excerpt:

Suddenly, without warning, there's a brilliant flash straight ahead. You check the radar screen. Nothing. Pretty soon there's another flash, and another. Next thing you know the flashes have turned into one gigantic force field of some kind and it's dead ahead. You check the radar screen, still nothing.

From a game play perspective, this narrative is strangely disconnected from player interaction. Twice in the text the “you” of the narrative checks the radar screen. What radar screen? There isn't any radar element in the game at all. And what about the flashes of light? When the game begins, there are no flashes of light, only solid rows of colored blocks and a ball. What is it suppose to mean? The narrative's insistent emphasis

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on the blankness of the radar screen, the fact that the force field doesn't show up on the spaceship's radar, emphasizes the light-based immateriality of the Breakout experience, still a novelty in the early era of digital gaming. Perhaps the text references the first moment of play, the instant the television set is turned on and the darkness suddenly lights up with the glowing pattern of a warming cathode ray tube. Sometimes, a narrative descriptor doesn't have to provide a logical basis for play, and can simply reference a more general narrative genre. In the case of Super Breakout, the descriptor fails to produce an accurate narrative for the impending game play, but it does tell a wonderfully meta-textual story of electrons dancing on a phosphor screen, circa 1981.

In addition to acting as a "frame" for the central game play, narrative descriptors also can appear within a game. In Thunderstorm there is little or no pre-game narrative set-up that describes player interaction. Instead, the narrative play of Thunderstorm transforms the numbers on the dice into a story of an approaching storm, during the game itself. Lines on a page become houses; dice rolls become acts of construction and destruction. Narrative descriptors work in two ways. They can act to identify objects or events inside a game: "prison," "house," "thunderstorm," "force field." They can also provide frameworks of interaction for players: "this is a game about thunderstorms;" "this is a Tennis simulation." (These two uses of descriptors correspond directly with the two modes of game representation from the previous chapter—that games *can represent* and that they *are representations*.)

Let's take a close look at one game, Asteroids, to see how it integrates narrative descriptors to create a compelling game experience. The game instructions on the arcade cabinet contain the following text:

Shoot the asteroids while avoiding collisions with them. Occasionally a flying saucer will appear and attempt to shoot you down with guided missiles. Destroy it or the missiles for more points.

What information does this narrative description contain? We can infer that:

- There are two kinds of objects in the game we will battle: asteroids and flying saucers. Both have destructive capabilities. Destruction occurs through collision, either with an asteroid or a guided missile.
- Interaction with the asteroids takes two forms: we can shoot them or we can maneuver around the asteroids to avoid contact.
- Interaction with the flying saucers involves shooting and maneuvering as well. Because the flying saucers use guided missiles, it will be more difficult to outmaneuver them.
- Flying saucers are more rare and therefore more valuable. We gain additional points by destroying them.
- Flying saucers are active enemies: they will try to destroy us. Asteroids are passive enemies: we must avoid running into them.
- The movement of the asteroids is independent of the movement of our ship, whereas the movement of the guided missiles is directly linked to it.
- The guided missiles can destroy asteroids if we position our ship behind an asteroid. The asteroid then becomes a shield for the ship.

So much information contained within such a short descriptor! But there is more. Although it is not explicitly stated that we are in a spaceship or that we are in outer space, both of these facts follow from the instructions. We know asteroids and flying saucers exist in outer space, not in the desert or the ocean. We also know that if we are able to shoot and maneuver we must be in a vehicle that allows these actions. We can conclude from the story's narrative logic that we are in a spaceship. The details about our spaceship—what it is called, what it uses for fuel, the size of the crew—don't matter. The key narrative information is that it can maneuver and shoot the enemy.

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But what if a player skips over the instructions and just starts playing? Without the introductory textual description, will players know what to do? In a well-designed game like *Asteroids* the answer is yes, as there are many other narrative descriptors to orient the player. First, the name of the game and the hard-to-miss cabinet graphics communicate that *Asteroids* is a science-fiction narrative that takes place in outer space and that the white geometric outlines moving on the dark screen are *asteroids*. Second, the representation of objects in the game world provides information about what they are and what forms of interaction will take place. When the game begins, the screen is filled with many asteroids but only one arrow-shaped object, located dead center. If the central placement and unique identity of the arrow-shaped object is not enough of a clue, a player who simply starts mashing the button interface will quickly discover that he or she can directly control the arrow (but not the asteroids). It is easy to conclude that the arrow object represents the player, situated in the game world of an asteroid field.

A player unfamiliar with the game or its objectives will quickly be smashed to bits by an asteroid. This dramatic event is represented by a visual and audio explosion, as well as by the removal of one of the player's remaining ships from the corner of the screen. The act of being destroyed by an asteroid contains a wealth of information for the player, signifying that the asteroids are lethal and should be avoided. When a flying saucer suddenly appears and starts shooting at the player, it is logical to infer that it too is an enemy and therefore worthy of destruction. When a player successfully destroys a flying saucer and receives bonus points, he or she learns that flying saucers are more valuable than asteroids. Flying saucers only appear at intermittent intervals, and their rarity emphasizes their bonus point value and their extra degree of deadliness.

Each of these events is made possible by a narrative descriptor, a *representation* that helps players understand the activity of the game within a larger narrative context. In *Asteroids*, all of

the narrative elements are both integrated and discernable, the two key qualities of meaningful play. Even without reading the instructions, players can, through interaction with the game world, experience narrative play. This is a sign of a well-designed game, one that provides a clear and compelling system of meaning. In this kind of context, play itself reveals the narrative meaning of the game world.

Every element of a game brims with narrative potential. The narrative components of a game are not just the backstory and cutscenes. *Any* representational element can be a narrative descriptor, an opportunity for you to communicate the story that you want your players to experience. In *Asteroids*, the game elements, the interface, and even the arcade game cabinet all play a role in the narrative. Nothing is irrelevant: every piece helps tell the story, which is greater than the sum of the parts. Is *your* game narrative as tightly and elegantly designed as *Asteroids*?

Worlds and Stories

Representations in games do not exist in isolation from the rest of culture. They rely on conventions drawn from narrative genres in other media. Although the playgrounds of games may offer fictive and fantastical spaces, these spaces are almost always familiar in some way to players. The deep space of *Asteroids* is not something any of us have experienced directly, but it is part of a genre-based universe found in the stories of science fiction writers and astrophysicists. Players can appreciate the narrative of the game even if they have never piloted a space ship in a field of asteroids, because of the familiar conventions of its representation.

In order to understand the setting of a game world, players rely on knowledge from other, similar stories. Players starting a game of *Asteroids* for the first time know what to do in part because they are familiar with a fictive genre describing interactions between spaceships, flying saucers, and asteroids in outer space. (*UFOs that shoot at you are enemies and must be*

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destroyed or avoided.) The narrative knowledge that players bring with them to games not only helps them recognize the conventions of the game universe, but also limits and constrains their actions. As game scholar Rune Klevjer writes in an analysis of *Grand Theft Auto III*,

Sniping a Columbian gangster in the head in *GTA III* is one thing. Doing the same to, say, a little girl would not be the same (consequently, there are no children in Liberty City). The difference between these two representations is partly rooted in their respective real-world references—a mean-looking adult male versus a pretty little girl—but also linked to a specific, typified universe constructed by the game. Within this familiar fictional ready-made, the mean-looking guy turns into (through a few, stylized hints) a very familiar gangster of the most ruthless, drug-dealing kind.¹²

Grand Theft Auto III takes place within the pulp genre setting of urban gang warfare and organized crime. As a fictional universe, a set of narrative conventions stylizes this world. Shooting a gangster fits within these narrative conventions, whereas doing the same to a little girl does not. Similarly, being attacked by flying saucers in *Asteroids* establishes a narrative frame that wouldn't include an Appalachian mountain man firing at the player with a slingshot. In other words, the setting of a game determines the characters, events, and actions permitted within its narrative frame.

The gangster universe [of *GTA III*] as a setting, and as a set-up for play, is partly founded on the formulaic stories told within it. The actions performed by the player...become meaningful within the genre-based universe as a whole. "Story" and "fictional world" are two flips of the same coin—a pre-written, typified symbolic action, defining a typical identity of the playground. Even though we can imagine a similar fictional world without one, single, overarching story framing the game play, there would at least have to be recognizable narrative elements that could give some more genre-specific substance to an otherwise vague atmosphere of urban

crime. In genre fiction, description evokes implied narratives, and narration evokes implied description.¹³

Klevjer identifies two components of game narratives: *fictive worlds*, which represent narrative context, and *story events*, the actual game incidents that take place within the fictive world. There is a complex relationship between these two narrative elements, each informing and enriching the other with narrative meaning. In *Asteroids*, the fictive world is the genre of space-based science fiction, and the story events are the actions that happen to the player's ship and other game elements within this narrative setting. The story events of shooting, maneuvering, destruction, and survival gain narrative meaning from the larger fictive world of the game, even as they simultaneously help to define that fictive world.

It may seem like fictive worlds and story events mirror the concepts of embedded and emergent narrative structures. Actually, they are not parallel concepts. The embedded/emergent distinction identifies how narrative elements are organized in the formal structure of a game: is this narrative element pre-generated or does it emerge from play? Fictive worlds and story events reference game narrative in a very different way, on the level of a player's imaginative engagement with the game story. Both embedded and emergent elements can play a part in defining either a game's fictive world or its story events.

Klevjer's concepts provide a useful way to think about game narratives. Too often, a game's fictive world is taken for granted, a generic backdrop for scripted plot events. Game designers should more rigorously engage with the complex, interdependent relationship between the fictive world and story events. The events of the plot, the "game story," are made possible by the existence of a larger fictional world in which the story takes place. At the same time, the story events themselves help to flesh out and inform the fictive world. Designing fictive worlds means paying close attention to the narratives such worlds inspire. And vice versa. Together these two elements of

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game narratives create an artificial context where game experience acquires narrative meaning. Although the crazy cartoon world of Super Mario does not mirror the space of the real world, events within the universe of Super Mario faithfully follow our expectations of the kinds of things that should happen in that world. Players are not surprised or confused to come across colorful magic mushrooms, cute and menacing enemies, or gigantic green pipes. Each of these elements makes narrative sense within the specific setting of a Super Mario game. The inclusion of a photorealistically rendered dog, on the other hand, would feel out of place. Thus, narrative descriptors imply a representational logic that limits and constrains the design of the space of possibility. These limitations allow for the integration and discernability of all elements contained within the game world, a world whose setting describes the limits of its own action.

When designing a game it is critical to pay attention to the relationship between the narrative setting of the game world and the kinds of events that would occur within such a setting. If you are designing a far-future anti-gravity racing game, the narrative descriptors of characters, events, objects, and behaviors should be contained within the logical limits of this setting. Players should have a sense that the technology powering their vehicles has not yet been invented, and that the physics affecting the speed and movement of the vehicles is not something they have experienced on Earth. The design of a board game titled "Dot.Com Mania" should model the events and aesthetics of the 1990s bubble economy, not that of the Great Depression, perhaps taking visual and story cues from films like *Startup.com* and magazines like *Red Herring*. Creating game narratives means playing in the realms of culture, engaging with tropes and conventions of genres from literature, media, popular culture, entertainment, and art. Incorporating representational frameworks from relevant narratives will help you elaborate on and transform those frameworks in ways that lead to compelling (and perhaps unusual) game experiences.

This certainly doesn't mean that you can only design games that exist within established narrative genres. It is possible to create new kinds of fictive worlds or combine and re-mix conventional narrative universes in new ways. Rules are made to be broken. Perhaps it is possible to drop a photorealistic dog into a Super Mario-like game. But the resulting game narrative has to incorporate this inconsistency in a coherent way. Perhaps the game is about a real world dog that became transported into a video game (hence the different representational style). Or maybe it becomes a game with a collage aesthetic, in which every character has its own unique visual language.

When you are creating games with less typical narrative experiences, your design task becomes more challenging. Your players will not already be familiar with your game's fictive world. For example, what are the narrative conventions of a game about office supplies that come to life at night when the workers go home? In this case, it is up to the game designer to establish the fictive world for the player as quickly as possible, perhaps making direct or indirect reference to relevant narratives, such as *Toy Story's* inexplicably living toys, the playful tale of Pinocchio, or even the office life parody *9-to-5*. Each of these narrative contexts offers different ways to establish both the fictive world and to organize the events that happen within it.

Crafting Game Narratives

How do you create the details of a narrative that will let you achieve the fictional world and story events that you want your players to experience? There is no single magic formula, and as storytellers in every medium know, the devil is in the details. Because our focus is game design, this book does not include sections on the visual aesthetics of character design, tips for writing in-game dialogue, or other specifics of how to construct narrative descriptors. However, we can offer some general ways of thinking about the craft of game narratives. By paying careful attention to the details of your game representations, and how they bridge the formal game system and the player experience, you will be able to generate meaningful narrative play.

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Consider the following text from the Wipeout XL game manual:

Future world...

A ball bounces. A pin drops. A man falls.

Gravity is the glue which binds us to our planet.

We are about to apply the solvent which will free our species forever.—*Pierre Belmondo, Director of European AG [anti-gravity] Research, Nevada, April 2035*

Although Wipeout XL's introductory narrative is extremely abstract, it communicates a sense of what it is going to *feel* like within this future world. The sparseness of the description, the metaphors of gravity's glue and the solvent used to "free our species forever," work to create an emotional story context. The formal qualities of the narrative description establish a particular mood and setting. If the text had been written in Middle English, the narrative context of the world would feel quite different. *How* something is said is just as important as *what* is said when you are creating narrative contexts. This text, situated within the future-stylish, techno visual context of the Wipeout XL game graphics, acquires yet more narrative meaning, even as it imbues the rest of the game with meanings of its own.

Consider the design of objects or settings. The visual and audio aesthetics of Silent Hill creates a distinctly creepy and unsettling atmosphere. The home movie-style opening sequence, set to discordant music, establishes a mood of underlying horror that is supported by the limited use of light throughout the game. Even in daylight it is foggy and difficult to see very far. When it is dark, a player's field of vision is limited to the tight radius of a single flashlight. Light operates as a narrative element, creating a dense mood and a framework for cautious interaction. Audio is also significant in creating the distinctive narrative experience of Silent Hill. Background noises such as the haunting sobs of a child in the deserted school create a larger narrative setting and work to gradually unnerve the player. The unsettling, distinctive sounds of approaching enemies,

which range from flapping winged beasts to harmless ghost babies to shuffling homicidal nurses, foreshadow their likely appearance and attack. The game uses cinematic storytelling techniques to good effect, by intrinsically linking them to the game system and player interaction: the enemies are revealed first in sound, then in visuals, then through combat interaction. Gratuitous "spooky" sound effects can quickly wear thin, but when those effects signify future game events, the player will sit up and take notice.

Narrative descriptors in games include everything from the written introduction to the opening cinematic, from the design of light and sound to the style of the game interface. These narrative elements not only pertain to plot, character, and setting, but also give players information about the types of interaction that are appropriate and how they are to behave. Together, these elements form an interlocking, complex narrative system, from which the player's narrative experience emerges. How does this experience become meaningful play? Through design choices that create discernable and integrated relationships among the parts of the system. In all of the successful examples of narrative play discussed so far, the core design values of integration and discernability still hold true. For example, the approaching enemy sound effects in Silent Hill become meaningful because they are integrated into the game system, warning the player about impending known (or unknown) monsters in a way that is consistently clear and discernable.

Games as Narrative Systems

The creation of a game narrative is really the creation of a narrative *system*. This notion unifies all of the concepts presented so far in this chapter. As a design problem, creating the narrative elements of a game is very much like creating other aspects of your game. You are crafting a system of parts, simple elements that interrelate to form a complex whole. The meanings that emerge from a system arise out of the individual relationships between elements, as well as the more global patterns that emerge across many sets of smaller relationships.

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Case Study: Drome Racing as Narrative System

Even games that are not explicitly oriented toward story creation can be framed as a narrative system. The LEGO Drome Racing Challenge is a massively multiplayer game in which players create a game persona, collect and customize LEGO race cars, and then race them against each other on a variety of tracks. During a race, players do not directly control their cars but instead see how their racing strategies and car customization plays out on the constantly changing tracks. As a large-scale community game, the Drome Racing Challenge offers many modes of interaction, manifesting narrative play through a variety of means.

As a game system, the narrative of the Drome Racing Challenge emerges from the interaction of the many parts of the game. The total narrative experience of the Drome Racing Challenge does not lie in any one of these individual elements, but instead, their overall effect arises out of the system as a whole, which includes:

Pre-existing backstory. The game exists within a larger narrative world that includes comic books and the LEGO Racers toy products. This sci-fi racing fictive world, where speed-hungry drivers compete against each other in the many dangerous tracks of the Drome, provides the setting for the game, as well as the primary frame for the narrative play.

Player as protagonist. Each player constructs a driver character that represents him or her in the world of the Drome Racing Challenge. This driver is defined through a cluster of narrative descriptors: team name and colors, helmet icon, racing motto, and text phrases that the driver utters when making or accepting a racing challenge and winning or losing a race. All of these characteristics are embedded narrative content, selected by the player from pregenerated lists. Other player characteristics, such as a player's racing record, status on the leader boards, progress toward the next license rank, and particular cars and parts collected and assembled, are more modular and emergent ways of personifying the player.

Multiple goals. The Drome Racing Challenge embeds long- and short-term goals throughout the game experience and ties them directly into the narrative. Players build a collection of cars and parts, upgrade and evolve cars that they own, improve their license class, compete on the rankings boards, and interact in limited social ways with other players through the narrative world of the game.

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The total narrative experience of Ms. Pac-Man arises from a myriad of components: the title of the game and its reference to the existing narrative of Pac-Man, the arcade cabinet graphics and text, the looping animated title screens, the in-game cartoons between levels, and all of the visual and audio elements of the game itself. These elements do not exist in isolation, but combine to form a narrative whole that is more than the sum of the parts. The narrative is multi-faceted, and not only establishes a cartoony fictive world and a romantic backstory for the protagonist, but also provides a narrative framework for the game play itself. The play produces intense emergent narratives of insatiably hungry consumption, strategic avoidance and survival, and dramatic turnabout where the hunted temporarily becomes the hunter. These emergent experiences exist in counterpoint to the light and colorful fictive world of the game, resulting in a richly textured narrative experience in which every element plays a part.

A game oriented more explicitly toward narrative play is Advanced Dungeons & Dragons. In D&D and other tabletop role-playing games, the game is a system for generating narrative play, a system that can help define the characters, settings, conflicts, plots, and goals of the game narrative. These designed game materials usually include a formal system that details the rules of the game, as well as a narrative world that provides the overall settings and backstory. These two components are intertwined into the larger narrative system of the game. For example, in the fantasy medieval world of D&D, rules for armored swordplay, fantastical creatures, and magical spells are included, whereas rules for computer technology are not.

Although players can purchase pre-generated D&D adventures, it is more common for a game's Dungeon Master (the player that leads each role-playing session) to create original adventures. The Dungeon Master leads the rest of the players through these homebrewed stories, each participant role-playing a single player-character. The Dungeon Master provides the rest of the narrative elements, describing each setting the

players enter, role-playing allies and enemies the players encounter, and slowly revealing the dark mysteries and unexpected plot twists of the ongoing story.

Dungeons & Dragons and other similar games are quite explicit story-creation systems, designed to facilitate the structured, collaborative authorship of narrative play. Each player is a part of that system, as are the player-characters, the Dungeon Master, and the many elements of the game world. These game world components might be formally defined (*a long sword does 1–12 points of damage*), narratively defined (*the wizard hermit doesn't seem to like us*), or both (*if we can convince the wizard to enchant my long sword, it will do +2 damage*). As the players converse, roll dice, and consult the game rules, they enact pitched battles and dramatic dialogues, brokering power, knowledge, and personality as they together create meaningful narrative play. Every action taken, whether a difficult feat that requires a die roll or a clever conversational stratagem, has its place in the overall narrative system, buoyed up by the formal rules that make such actions possible. Actions simultaneously expand the ongoing story as new narrative elements are added to the series of events.

Cutscenes

Kane sneering out from the briefing video of Command and Conquer. Lantern light over a wrecked inn in Diablo II. Bahamut blasting your foes to ashes in Final Fantasy VII. There is no doubt that the humble cutscene has left its mark on the memories of most gamers. But how did these beautiful scenes affect the gameplay of the titles they graced?—Hugh Hancock, "Better Game Design Through Cut-Scenes"

The concepts for designing narrative play we have identified so far are relevant for all kinds of games, on and off the computer. However, there are new forms and techniques for the design of narrative play emerging specifically from digital games, and we finish this chapter by investigating a few of them. One narrative

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Drome Racing Challenge

Narrative space. Initially, every player goes through a short introductory tutorial. After that, the player is free to create his or her own patterns of movement through the game. As a web-based game, the Drome Racing Challenge consists primarily of HTML web pages, designed in the high-speed future-style of the Drome. The narrative space of the game is a space of information and technology rather than a represented physical space, appropriate for the media-centric fictive world of the game.

Patterns of activity. The two core activities of the game are customizing cars and racing them on tracks. Both activities have their own dramatic structures and patterns. Car customization occurs in the “garage,” a narrativized pit-stop and auto store where players acquire and manipulate car parts, attaching them to slots in their cars. In the garage, players prepare for a race, tuning and tweaking their cars for particular tracks. A common game play pattern is to run a few races, then head back to the garage to buy a new part, tweak a car, and return to the tracks to test it out. This behavioral loop becomes a narrative pattern, evoking the dedicated lifestyle of a hard-working race driver.

The race. In some respects, the race preparation is simply a prelude for the dramatic narrative moments of an actual race. Once a player readies a car and places it on a track, any other player can challenge it. The game program generates a race made up of random hazards and obstacles, takes into account both of the customized cars entered into the race, and generates a series of race events as a result. The program translates this formal information into a 2D cartoon, emergently created by software that uses the race events to structure pacing and shot structure. The animation then plays out as a Speed Racer-style, action-packed sequence of events. Abstract speed lines, informational overlays, and inset views of the drivers are combined with shots of the vehicles racing through the Drome’s hazardous environments. The resulting experience references the cartoony, sci-fi style of the overall game space, generating a compelling narrative out of the linkages among descriptor aesthetics, the fictive world frame, and meaningful game outcomes.

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design tool many digital games utilize is the cutscene. Although cutscenes are often described as being “out-of-game” narratives that cut into game play, this distinction is only useful if we limit the definition of game play to those moments when players take action within the game world. As we know, all kinds of narrative descriptors, from the graphics on a game box to the text in a game manual, are important in defining a game’s fictive world. Rather than focusing on whether cutscenes occur in or out of game play, we want to consider the *role* of cutscenes in the overall design of narrative play.

Cutscenes take many forms, from text-based descriptions to comic-book style storyboards to real-time 3D cinematics or pre-rendered animated sequences. Sometimes these forms are mixed, as in *Max Payne*, which combines real-time cinematics with the visual language of a graphic novel to tell its story. Prescribed voice-overs or text-based captions are often combined with animated visual sequences; sound usually plays an important role in establishing a mood or atmosphere. In all of these cases, cutscenes are clearly an *embedded* narrative element—a scripted narrative sequence that is the same every time.

As storytelling devices integrated into the formal structure of the game, cutscenes contain narrative descriptors on many levels. More than other game elements, cutscenes closely resemble existing forms of narrative media: they are linear, prescribed, non-interactive, and story-driven. Even the term “cutscene” refers to their patently filmic nature. The ubiquity of cutscenes sometimes earns them derision from experienced game players, but in fact, cutscenes contribute to narrative play in a number of important ways. As Hugh Hancock writes in “Better Game Design Through Cut-Scenes:”

The cutscene is there to make a game’s world more real—not just by telling a story, but also by reacting to the player, by showing him the effects of his actions upon that world and thus making both the world more real and his actions more important. The cutscene

fills the role of both prequel and epilogue: showing the player what the world is like before he enters it, what needs he has to fill, what he has to work with and what he has to face, and afterwards showing what the effects of his actions upon the world were, whether good, bad or both.¹³

Although we might quibble with Hancock’s use of the term “real,” we agree with the spirit of his statement. Cutscenes are a way of leading players through the narrative space of a game, highlighting key moments and punctuating important events and outcomes. As a kind of narrative in miniature, cutscenes help fill out the larger narrative frame of the game, playing a crucial role in establishing the fictive world of a game’s story. They can introduce story, setting, and character, particularly in the early sections of a game when players are still becoming familiar with the game world. The cutscenes in *GTA III* help establish the pulp gangster setting of the game. Because this is a narrative genre that often appears in filmic form, the highly cinematic cutscenes do a more efficient job of setting up these narrative conventions than the moments of game action.

Cutscenes may “cut” into player interaction, but they directly support narrative play on many levels. Cutscenes can foreshadow events to come, operate as flashbacks, or create transitions between settings. They can show players how to interact with objects and give players information about resources in the game. Consider the following uses of cutscenes, some of which come from Hancock’s essay:

Surveillance or Planning Tool

Cutscenes can provide players with access to information unavailable to them during game play. As a surveillance tool, cutscenes might allow players a glimpse of another part of the game space, or provide information on the current whereabouts of a character or treasure they are seeking. As a planning tool, cutscenes can provide players with information about an event or obstacle they will soon encounter, or elaborate on the outcome of an action.

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Drome Racing Challenge

Multiple narrative tellings. After a race, the race events are translated into a "race analysis." The race analysis is a spreadsheet-style summary of each race event, listing the car and track factors that determined its outcome. The exact same race events that appeared in the animation here become numbers and text, interpreted through a new set of narrative descriptors that emphasize strategic, rather than visual, play.



Drome Racing animation

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Say you just completed a mission that used up most of your health resources. A cutscene shows that you are about to encounter a heavily armed opponent. What to do? Perhaps you should return to the previous level and garner more health. Or maybe it's time to haul out that powerful limited-use weapon that you have been saving for an emergency. Because the cutscene provided you with useful information about the implications of your past actions in relation to an upcoming event, you can plan accordingly. Cutscenes create narrative scenarios that can enrich the decision-making process for players.

Game Play Catapult

Although cutscenes are often used informationally to provide players with critical data, they can also work to catapult a player into a new situation. They can add narrative drama by building suspense, or provide narrative movement from one situation to the next.

For example, imagine that you are in an adventure game and you have just solved a puzzle that rewarded you with a rope. It is an unusual reward and you are not sure what to do with it, as you are traveling through a desert: not much use for a rope here! The animated cutscene that follows shows a trapdoor at the top of the next sand dune. Just as the cutscene makes a dramatic pan from your casually strolling character to the open trapdoor, the cutscene ends and you find yourself back in active game play, falling through the trapdoor and down an abyss. Thinking quickly you use the rope to lasso a rocky overhang. Safe now, you check your surroundings and realize that you are no longer in the desert, but are hanging high above a river in the middle of a dense forest.

In this instance the cutscene not only catapulted the player into the middle of a dramatic game event, but also transported the player to another part of the game world. Cutscenes that drop players directly into the middle of

game action allow them to resolve the cutscene's mini-narrative through game play. Using a cutscene in this way enhances suspense and drama by grafting the non-interactive sequence directly to player action.

Scene and Mood Setting

Many digital games consist of a series of linked levels or game spaces. Although these levels or spaces are part of a larger system, they each have their own unique identity. Cutscenes can reinforce the differences between settings and highlight what might be new and unusual about an upcoming level. In *Virtua Fighter 4*, for example, there are fifteen different fighting arenas. Brief cutscenes used before each bout show off the details of the environment, establishing the setting and creating a sense of place for the upcoming match.

Cutscenes can also establish mood, or reinforce the emotional arc of game events. As players move deeper into *Silent Hill*, the cutscenes become increasingly eerie and disturbing. In *Final Fantasy IX*, cutscenes reinforce the epic quality of the hero's journey through the use of dramatic animation, sound, and editing. The tongue-in-cheek dialogue of *Max Payne's* cutscenes lends an ironic edge to the urban noir of the game world. In each example, cutscenes establish a mood that becomes part of the game's narrative play.

Choice and Consequence

Cutscenes give game designers the power to dramatically reveal the outcomes of player choices, outcomes that can affect not only the player's character, but often the game world as well. Cutscenes can show a player's character achieving a goal, such as winning a race and receiving a gold medal, or saving a planet and being surrounded by throngs of cheering civilians. Cutscenes can also show failure outcomes, when goals are not achieved or poor choices are made: a protracted grisly death sequence, a scene of

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swarming enemies ravaging the game world, or a shot of the bad guy riding off with both the treasure *and* the girl. Representing the consequences of player actions in story form enriches the narrative play of the game and often makes the game world feel more alive.

Rhythm and Pacing

In James Bond 007 *In Agent Under Fire*, short cutscenes provide regular moments of release from intense action, allowing a player to catch his or her breath or contemplate upcoming choices. The rhythm created by the cutscenes is a way of controlling the game's overall pacing. Once the pattern has been established, players learn to expect breaks in game action, which can heighten the pace or slow it down. At the conclusion of a big battle, for instance, the pace of the game can be reduced by inserting a slow-motion cutscene of the falling enemy, or it can be sped up by immediately catapulting the player into the middle of another battle. Variation and control of cutscene pacing contributes to narrative play by emphasizing specific moments in a game. A long, slow cutscene that follows a player's solution to a particularly difficult puzzle can signify the importance of the event in the overall game experience.

Player Reward

In *Games as the Play of Pleasure*, we explored games as a series of punishments and rewards. Cutscenes are often used for both of these purposes: as a visceral punishment for failure as well as a tangible reward for achieving a game goal. As Hancock notes, "the *Final Fantasy* series' game play is often driven by this imperative, whether trying to advance through the game to see the next cutscene in the story, or trying to find the magical 'summon' spells within the game, which a lot of people have noted are primarily worth finding in order to enjoy the spectacular animations which accompany them."¹⁴ The gorgeous

Hardcore Gamers and Cutscenes

Within communities of game developers and game players, debate rages about the value of cutscenes. Hardcore gamers have a reputation for ignoring game guides, opening cinematics, and in-game cutscenes, preferring to dive right into the action. If one purpose of these elements is to provide information about the game world and setting, what happens when players skip over this information? If these dedicated gamers have no problem stepping into the narrative space of game play despite their avoidance of cutscenes, does this mean that the information and experiences they provide is superfluous?

Many long-time gamers make the argument that narrative descriptors found in cutscenes and game manuals do not affect game play. This argument is both true and false. It is true that these forms of narrative description are not necessary for *their* play of the game. Remember that a chief function of these framing devices is to establish the game's fictive world. As hardcore gamers, these impatient players have experienced enough games to have internalized the common uses of game setting and story. Their long experience with the codes and conventions of games—with stories, settings, events, and characters—has replaced the need for an external description of these worlds.

Players who lack this experience, on the other hand, have much to gain from the information provided in backstories and opening cinematics. Even expert players in one genre of game will find narrative descriptors useful when playing a game from another genre for the first time. In a complex role-playing game, for example, the explication of the story in the game guide creates a context for the interactions to come. A player quickly learns the premise and goal of the game, the kinds of actions she can take in the game world, the characters she will meet along the way, and above all, why she is in the game world in the first place. This kind of information might not be self-evident to a gamer that plays mostly simulation games.

The lesson? Design for both types of players. Never assume that your players will carefully examine every framing narrative descriptor: be sure to make your story come alive in the actual play of the game. On the other hand, when appropriate you should feel free to embellish your core game events with opening cutscenes and other preliminary narratives that extend your fictive world for players that want a richer story experience. If you manage to hook players with your game play, they may go back and actually watch the introductory cinematic they skipped earlier to make sure they didn't miss anything important.

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cinematic cutscenes in Warcraft III were designed, in part, to reward players for their investment in many hours of game play. Although using cutscenes as rewards might seem like a straightforward design idea, the experience of receiving such a gift during game play can be tremendously satisfying and motivating.

There are plenty of other ways to employ cutscenes in the design of narrative play, whether by mixing and matching the uses listed here or by finding completely different methods that are better suited for your own game. However, it is worth noting that games certainly do not have to include cutscenes. Narrative play arises from the complex interaction between numerous elements of a game system. Cutscenes represent just one of these possible elements, albeit one that is highly narrative in its own right.

Retelling Game Stories

It's natural for players to construct a story from a game play experience, but it is not inevitable, nor is the story the game.—Greg Costikyan, RE:PLAY

Narrative has happened, or been created, while “playing” is always happening, a particular realization of the potential offered by the game, the precise shape or outcome of which is indeterminate.—Geoff King and Tanya Krzywinska, “Computer Games / Cinema / Interfaces”

When does the narrative play of a game become a narrative about the play of the game? When is game experience retold as story? There is a difference between playing the narrative of a game and telling the story about that play experience. Up to this point in the present schema our exploration has dealt strictly with narrative play within the space of the magic circle. We examined how narrative play emerges from elements within the game world and how game designers can craft meaningful narrative contexts for their players.

But narrative play can also occur when a story is created through a recounting of a game experience. Why does this retelling occur? Below are examples of various reasons why players re-count game experiences.

To recount a particularly dramatic victory: *You should have seen it! I had just a sliver of health left, but I threw one of those elbow-backfist-spin-kick combos, followed by a triple dragon punch. I barely finished him off!*

To share a series of story events: *In a game last week our characters were attacked and we were forced into an emergency landing on an asteroid. We were rescued by the local population who fed us and took care of our injured crew. But unbeknownst to everyone, we were carrying a virus deadly to their species, spawning an epidemic. Many people died.*

To share strategic information: *I found this secret door at the beginning of the mission that let me sneak up behind the demon snipers and I was able to get through the entire level using only the chainsaw.*

To celebrate the pleasure of play: *I was running so fast I felt like I was flying!*

It is common for players to construct stories out of game play experience, creating narratives that exist separately from the actual narrative play in the game. This is a subtle point that bears repeating. Narrative play *within* game play emerges from a player's interaction with the game system. Narrative play *outside* of game play is the retelling of this experience in story form. This phenomenon of *retelling play* shouldn't seem surprising. When we see a great movie or overcome a life obstacle, there is a natural tendency to share this personal information with friends. Games can also represent powerful experiences in our lives that we want to share and relive with others, particularly other game players that will appreciate the details of play. Retelling play helps build communities of players through a common interest in the experience of a particular game.

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Retelling play can take many diverse forms, such as verbally recounting a Dungeons & Dragons encounter, pantomiming a thrilling Basketball play, posting a sequence of edited Sim City screenshots online, writing fan fiction about an EverQuest adventure, watching an instant replay in a drag racing stadium, text-chatting about a Tennis match post-game, or uploading a recorded demo of a Quake deathmatch to a community website. Because retelling play is such a common phenomenon, game designers have found many strategies for fostering it. What about including an instant messaging system within your online game that allows players to comment on the action while playing? Or allowing players to review recorded game actions after the fact? Or providing functions that let players take screenshots of your game to post online? All of these are existing devices game designers use to support re-telling play. In the next few pages, we look at strategies for designing retelling play in more detail.

The Replay

One common tool designed for retelling play is the in-game *replay* mode. Many sports games such as Tony Hawk's Pro Skater 3 or NBA Courtside offer this function, which allows players to watch a recording of their game play. Players can usually save replays, giving them a chance to review their greatest moments many times over. In NBA Courtside, for example, the Instant Replay mode affords players the opportunity to look at the action from any vantage point. A zoom function allows for a close-up look at players' faces, which can be enjoyable in a game where NBA greats such as Karl Malone have lent their faces for digitization. The Instant Replay mode also offers seamless, frame-by-frame slow-motion advancement of the game footage by interpolating between key frames in a move.

The design of the replay mode can heighten the drama of the retelling by offering players dramatic camerawork or shifting points of view. In the Xbox driving game Wreckless: The Yakuza Missions, the sophisticated replays involve shifting cameras, changing filmic styles, and dramatic pacing. Players watch the

replay unfold from a variety of perspectives, as the camera quickly shifts from a wide overhead shot to a racing view from under the chassis to an extreme close-up of the car's battle-dented hood. There are quick cuts and jittery camera work, and the program simulates a constant shifting of "film stock," moving between shots that look like they were taken on 35mm film, 16mm film, a home video camera, and grainy black and white surveillance footage, with the occasional wireframe rendering thrown into the mix. The resulting narrative flavor produces a high-powered feeling of immediacy, increasing a player's connection to the "reality" of their game play. The replays become short films to watch, enjoy, and share.

The driving game Gran Turismo 3 offers several different types of replay modes, giving players multiple incentives to view their victories and defeats. The Standard replay mode follows a player's own car around the track, useful for reviewing the events of a race. Race mode skips around to any of the cars on the track, greatly increasing the narrative drama of the playback. The strategically helpful Training mode overlays a glowing line on the track to show the most efficient racing path. Video mode synchronizes the replay to any song on the game's soundtrack, from Snoop Dog to Lenny Kravitz and Jimi Hendrix, employing a variety of video effects to make the replay look like a music video. Lastly, the incredibly detailed Analyzer mode is available when there is only a single car in the race. This form of replay allows players to see telemetry data at each segment of the track, illustrating where a player hit his or her brakes, where the player should have hit them, and just what caused the player's car to go skidding into the wall.

All three of these game replay examples, NBA Courtside, Wreckless, and Gran Turismo 3, use retelling play not only to recall recent game actions, but to recast and extend them in a particular narrative light. In each case, the retelling play creates its own narrative experience appropriate for the particular game. The replays of NBA Courtside replicate the language of television sports coverage, narrativizing the context of the

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player's TV as if the game just played was a televised sports event. In the action game *Wreckless*, the replay serves to retell the play of the game not as a sports show but instead as a fast-paced sequence from an action film. The flurry of filmic styles, camera angles, and rapid-fire editing references Hong Kong action films that also inspired the game's settings, characters, and missions. Although this kind of shifting visual style would be too disconcerting to include in the real-time game play, the replay mode allows the cinematic underpinnings of *Wreckless* to reach full fruition. Lastly, the diverse replay options of *Gran Turismo 3* suit the game very well. As a racing series known for its detailed simulation of driving physics, it is appropriate that some of the replay modes emphasize the minutiae of racing strategy (although the Video mode is always available as a lighter counterpoint). The act of replaying a game, although not formally part of the game experience proper, is still part of the overall designed interaction. These three games demonstrate how retelling play can be used to wonderful narrative effect.

Recams

Tools that support players' natural inclination to transform their experience of play into a story to re-experience and share can enhance the narrative play of a game. In addition, these tools can spawn new forms of narrative production that emerge from the game, but exist entirely apart from it. One such example is the *recam*.

Recams originated from the culture of the first-person shooter, from games such as *DOOM* and *Quake* that gave players the ability to record and save their game play. Known as "demos," these recordings quickly became a way for players to show off their gaming prowess. Rather than just watching a replay, players could edit the game footage, alter the perspective from first-person to third-person, post it and share it with others. The term "recam" refers to the ability of players to alter camera positions, angles, and motions after recording a replay. Dr. Uwe Girlich of Philosys Software was an early developer of tools to assist players in making these recam demos:

I came into serious contact with computer games via *Wolfenstein 3D* and later *DOOM*. With *DOOM* I could create a recording of my game play and send this demo to other people to show my ability to solve some puzzles or complete a level in a shorter time than anyone else. I became fairly famous for my *DOOM* demos, but besides playing, I was more interested in programming and analyzing these demo files and so (after some research) I created LMPC, the Little Movie Processing Centre.

LMPC is a decompiler/compiler. It can be used to convert a binary demo file into a simple ASCII text file (decompile). Such a text file can be edited with any editor and afterwards it can be converted back into a binary demo file (compile). It is very easy to analyze and also to alter the demo file and even to create a demo file, which is not the actual recording of someone playing the game but a purely fictional movement in the game engine.¹⁶

Girlich recognized players' drive to narrativize game play—even to fictionalize it. Rather than showing the match from a first-person point of view, the perspective from which the game is played, a recam allows a shift in perspective to third person. What players see onscreen in a recam varies greatly from what they see while playing the game. In a first-person shooter, the game play perspective has players staring down the barrel of a gun. Player interaction with the game space is determined by the line of sight the weapon affords. But in a recam, the point of view is literally outside of the action. There is no vantage point other than the camera itself.

Recams highlight the role of point-of-view in narrative representation. The recammed match between two of the world's top *Quake* players, Thresh and Billox (expertly recammed by Overman of Zarathustra Studios), for example, not only lets viewers experience the game play from a third-person perspective, but situates the viewer both literally and figuratively outside of the militarized language of *Quake* and other FPS games. Recamming offers a point of transition between player and spectator, opening up the line of sight to include a new kind of narrative eye.

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The car racing and combat game, *Driver: You Are the Wheelman*, gives players a very different kind of retelling play: the opportunity to produce their very own recam movie. First, a player plays through a game mission. Then the player can access editing tools to select camera angles, film stock, and edit together moments of the game play into a cinematic story. The retelling play translates the fragmented, moment-to-moment action of a game into a single, unified narrative event.

Narrative play of this sort can become truly transformative. Players of *Driver* sometimes play the game as if they were actors in a film, making driving decisions based on how dramatic the action will look in the replay. Rather than playing the game to achieve goals dictated by the game's rules, players impose their own external, narrative goals. Playing the game to achieve a cinematic retelling bypasses the usual meaning of any action > outcome unit in the game. Actions are no longer singularly linked to goals internal to game play, but grow to encompass external, representational concerns. Play is pursued for the sake of creating story.

Demos, recams, and other forms of retelling are forms of narrative play supported by one or more elements of a game's design. Created as part of a game's formal system, features such as a replay function have the potential to enhance player experience on a variety of levels. Because players have a tendency to construct stories from their game play experience and to share these stories with others, giving players tools to craft these stories strengthens social community by providing an economy of exchange. These tools also deepen player engagement, as they encourage play in new and often innovative ways. What can retelling play do for your game?

Games Within Games

We began this chapter with a tightly focused, formal definition of narrative. One by one we took note of the narrative elements of games, pulling farther and farther back until we have all but exited the game itself. There is no doubt that game replays and recams are part of the total game experience, but they dance at the border of the magic circle, somehow just outside the core game play while still very much participating in the meanings of the game.

There is certainly nothing wrong with looking at such border phenomena, or in examining aspects of games that are both inside and outside the game itself. Our **RULES** schemas focused on the inner workings of game systems, but as we move through the schemas on **PLAY**, we will increasingly find ourselves peering outside the magic circle, whether it is to look at the relationships between represented game-reality and the "real world" or to examine the social metagames that occur outside the play of individual games. Of course, by the time we reach our **CULTURE** schemas, we will have pushed through the border of the magic circle entirely, focusing more on context rather than on the structures and play internal to a game.

The next schema, *Games as the Play of Simulation*, will straddle the border of the magic circle. Building on the previous two chapters, we look at the way games represent through simulated depiction, a mode of representation that grows from the status of games as dynamic systems. Analyzing the mechanisms of simulation in one sense means dissecting the internal representational machinery of games. At the same time, it also entails a much wider focus that looks at the relationship between games and the real-world phenomena they reference, a relationship fraught with the double-meanings of metacommunication and play.

If you are reading this book in order to tell better stories with your games, don't stop at the end of this chapter. The schemas that precede and follow this one, *Games as the Play of Meaning* and *Games as the Play of Simulation*, make up a special triad:

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three chapters that focus on *games as systems of representation*. Together they provide a series of structures for generating strong story experiences. And of course, they are also three ways of understanding the design of meaningful play.

Further Reading

***Computer Games and Digital Cultures Conference Proceedings*, Frans Mäyrä, editor**

Organized by the Hypermedia Laboratory of University of Tampere, Finland, the CGDC conference focused on the academic study of computer games, from perspectives including ludology and game studies. The essays readily acknowledge the challenge of studying digital games in the academic community. Of particular interest are several essays focusing on the relationships between narrative, emergence, interactivity, and community.

Recommended:

- “Computer Games/Cinema/Interfaces,” by Geoff King and Tanya Krzywinska
- “In Defense of Cutscenes,” by Rune Klevjer
- “The Open and the Closed: Games of Emergence and Games of Progression,” by Jesper Juul

***Cybertext: Perspectives on Ergodic Literature*, by Espen J. Aarseth**

Aarseth looks closely at electronic texts like hypertext fiction, text adventure games, MUDs, and MOOs. He categorizes these texts as forms of “ergodic” literature—a term borrowed from physics to describe open systems—with which the reader must interact to generate a literary sequence. Although Aarseth’s argument doesn’t fit cleanly within the model of narrative play we propose, his work has had a wide influence on the study of narrative and games.

Recommended:

- Chapter 2: Paradigms and Perspectives
- Chapter 5: Intrigue and Discourse in the Adventure Game

***GAME ON: The History and Culture of Videogames*, Lucien King, editor**

GAME ON is the catalog for a museum exhibition on videogames. The collection of essays covers everything from the culture of Pokémon to debates over violence in videogames. The three recommended essays each take a different point of view on games and narrative.

Recommended:

- “The Art of Contested Spaces,” by Henry Jenkins and Kurt Squire
- “Telefragging Monster Movies,” by Katie Salen
- “Story as Play Space: Narrative in Games,” by Celia Pearce

***Hamlet on the Holodeck: The Future of Narrative in Cyber-space*, by Janet Murray**

Murray explores the connection between the properties and pleasures of digital media and the future of storytelling, particularly electronic fiction. In looking at interactive fiction, MUDs, MOOs, “cyberdramas,” and other forms of storytelling within the digital realm, Murray discusses ideas of authorship, immersion, agency, and the aesthetics of electronic representation. The text is useful in outlining some of the basic issues connecting digital media and storytelling forms.

Recommended:

- Chapter 3: From Additive to Expressive Form
- Chapter 4: Immersion
- Chapter 5: Agency
- Chapter 6: Transformation

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***Shared Fantasy*, by Gary Alan Fine**

In one of the best sociological studies of fantasy gaming groups and role-playing games available, Fine offers an in-depth analysis of RPGs as a subculture, identifying how players generate meanings and identities in social worlds. Fine's research is based on extensive observation of tabletop RPG players and offers many insights into the role of fantasy and imaginative play in the construction of social and interactive narrative fictions.

Recommended:

Chapter 1: FRP

Chapter 2: Players

Chapter 3: Collective Fantasy

Chapter 6: Frames and Games

Notes

1. *RE:PLAY: Game Design + Game Culture*. Online conference. 2000. <www.eyebcam.org/replay>
2. Jesper Juul, "Games Telling Stories? A Brief Note on Games and Narratives." *Gamestudies.org*
3. J. Hillis Miller, "Narrative," In *Critical Terms for Literary Study*, edited by Frank Lentricchia and Thomas McLaughlin (Chicago: The University of Chicago Press, 1990), p. 77.
4. *Ibid.* p. 76.
5. Marc LeBlanc, presentation at the Game Developers Conference, 1999.
6. Doug Church, "Formal Abstract Design Tools." *Gamasutra.com*
7. Henry Jenkins and Kurt Squire, "The Art of Contested Spaces." In *GAME ON: The History and Culture of Videogames*, edited by Lucien King (London: Laurence King Publishing, 2002), p. 70.
8. *Ibid.* p. 65.
9. Mark J. P. Wolf, "Space in the Video Game." In *The Medium of the Video Game*, edited by Mark J. P. Wolf (Austin: University of Texas Press, 2002), p. 53–70.
10. Marsha Kinder, *Playing with Power in Movies, Television, and Video Games: From Muppet Babies to Teenage Mutant* (Los Angeles: University of California Press, 1993), p. 2.
11. Atari Inc., Adventure. *Atari Game Program Instructions* (Sunnyvale, CA: Atari, Inc., 1980), p. 2–3.
12. Rune Klevjer, "In Defense of Cut-Scenes," In *Computer Games and Digital Cultures, Conference Proceedings*, edited by Frans Mäyrä (Tampere, Finland: Tampere University Press, 2002), p. 198.
13. *Ibid.* p. 199.
14. Hugh Hancock, "Better Game Design Through Cut-Scenes." *Gamasutra.com*
15. *Ibid.*
16. Personal email correspondence between Dr. Uwe Glich and Katie Salen, November, 1999.

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Games as Narrative Play SUMMARY

- The study of games and narrative is an interdisciplinary field of inquiry that has been surprisingly contentious. Game design has a specific set of concerns that sidesteps many of these debates. In considering games as **narrative play**, the primary question is not *Are games narrative?* but instead *How are games narrative?*
- J. Hillis Miller defines a narrative as possessing the following characteristics:
 - **Situation:** A series of *events* that change over time.
 - **Character:** A narrative is conveyed through a *system of representation*.
 - **Form:** Representation is constituted by *patterning* and *repetition*.
- Games elements can have embedded or emergent narrative structures:
 - **Embedded** elements are pre-generated narrative components such as video clips and scripted scenes.
 - **Emergent** narrative elements are created on-the-fly as the player interacts with the game, arising from the operation of the game system.
- Games make use of embedded and emergent elements in various balances. The narrative of a game arises out of the combination of emergent and embedded narrative components.
- **Goals** help structure narrative play by making player planning and decision outcomes narratively legible.
- **Conflict** is another characteristic of all games that can shape narrative play. Conflict between players or between players and the game system can be tied to narrative conflicts for dramatic effect.
- **Uncertainty** of game outcome is linked to dramatic uncertainty that can fuel narrative tension. In narrative play, the unknown outcome of the game (or section of the game) is synonymous with the unknown outcome of the narrative.
- The **core mechanic** of a game, when considered as a narrative activity, can create game stories by having players perform narrative acts.
- **Space** in a game plays a large role in shaping the narrative frame and experience. Represented narrative space in digital games is particularly plastic and can engender narrative play through careful design.

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- A **narrative descriptor** is any component of a game that participates in the game's system of representation. Instructional text, in-game cinematics, interface elements, game objects, and other visual and audio elements are all narrative descriptors. All of these elements must be carefully crafted with narrative experience in mind in order to maximize narrative play.
- Narrative descriptors imply a representational logic that limits and constrains the design of the space of possibility. These limitations allow for the narrative integration and discernability of all elements contained within the game world.
- Narrative descriptors play two roles in a game, as fictive worlds and as story events:
 - **Fictive worlds** are the larger frames that contain the game world narrative.
 - **Story events** are the individual moments of narrative play generated as the game moves forward.

These two elements are interrelated. Fictive worlds create the coherent narrative spaces in which story events take place and become meaningful. At the same time, story events help expand and refine the fictive world. Games maintain consistent and understandable narrative experiences when there is a good fit between these two elements.

- A game is a **narrative system** in which the narrative experience of the player arises out of the functioning of the game as a whole. As with other kinds of complex systems, the whole is more than the sum of the parts, as individual elements interact with each other to form global patterns.
- **Cutscenes** are a common storytelling technique used in digital games. They help define the fictive world of a game, as well as fulfill a number of game play functions.
- **Retelling play** is the popular phenomenon of recounting game experiences. Digital games have developed specific techniques for encouraging retelling play, including:
 - **The replay**, in which a game experience is played again for the player.
 - **Recamming**, a special kind of replay in which the player can cinematically manipulate the information contained within the replay.