Human beings like to tell stories. How we describe the world and live our lives are bound in the stories we tell. We’re not just good at telling stories, however—we’re also good at seeing them. Perceiving stories is part of how we understand our world. Just as we can see patterns in the arrangement of shapes and forms—animals in the clouds or a face in the knots of a tree—we make stories out of things that happen around us. We impose a pattern, a meaningful sequence, on a set of events, and a story emerges.
Pattern Recognition

Stories told through films and comic books have always relied on the human ability to stitch together meaning out of a sequence of images. In film, many images flicker by every second; in comics, they’re laid out on a page, where our eyes can move from one to the next. In the 1920s, a Soviet filmmaker named Lev Kuleshov conducted an experiment that demonstrated the ability of film viewers to construct stories: he created three short, wordless sequences, each starting with a different image and then cutting to a shot of a famous actor looking into the camera with a neutral expression (see Figure 7.1). The first sequence started with a bowl of food, the second with a small girl in a coffin, and the third with a woman smiling as she sat on a divan. Each sequence ended with the same shot of the actor looking into the camera, his expression unchanged. The audience, however, interpreted the actor’s emotions differently for each shot: they praised his ability to express hunger, grief, or lust, depending on which clip they were shown. They constructed a story in their minds about what was happening.

Words are one of the oldest and most familiar means that we have for telling stories. Whether through spoken dialogue or exposition and narration, words can be used to tell stories in film, comic books, or games, but part of the beauty of these forms of communication is that they can also tell stories without words, as in Kuleshov’s experiments, or in comic books like Chris Ware’s Acme Novelty Library, which features many scenes and pages without words. Comics and films can convey elements of stories and allow the audience to construct stories through the juxtaposition of images.

Stories have been part of human culture since the origin of our species. Games are a little bit newer but have been around since the dawn of civilization, for many thousands of years, and add something else into the mix: a system of moving parts, made up of all the elements of vocabulary you’ve learned about in this book. When a player acts in a game, she pushes into the game’s shape of resistance, and the game responds by pushing back or opening more possibilities and spaces for her to push into. In this process, a potential fragment of a story emerges, much as it does when a viewer sees juxtaposed images in a comic book or film. Once again, it’s up to the audience—in this case, the player—to interpret what the emerging story might mean. For example, what does it mean that a pawn becomes a queen if it reaches the other side of a chess board? What does it mean that Mario can jump on enemies to squash them? These elements may not sound like the typical building blocks of a story, but they’re parts of what the creators of chess and Super Mario Bros. (1985) have put into those games for players to find, explore, and interpret.

As we’ve discussed in previous chapters, this process is a conversation between the player and the game. On one side, the ideas and vocabulary elements built into a game by its creator, and on the other the experiences and choices the player creates by interacting with it. In some cases, the possible stories that emerge from a game depend largely on what the creator chose to put into the game. These stories often resemble the kinds of stories that are told through
novels, comics, or film. At the same time, just as with all forms of communication, the audience plays a huge role in what the game has to say through their own interpretation—perhaps even more so, since it’s up to the player to decide how to push into the system, make choices, and pursue goals. As a creator, it’s worth thinking about what you’re putting into the game, how players will interpret it, and what they can do with the story.

Figure 7.1 Editing experiment of Lev Kuleshov.

This chapter explores the varied and challenging terrain that lies at the intersection of story and games. Game developers have been deliberately exploring this intersection for decades, trying to understand whether the interactive systems that make games work could be a vehicle for
storytelling that’s as rich and powerful as novels or film, and which might have unique qualities of its own to offer the world. On the other hand, “decades” is not a long time in the history of storytelling! There’s a lot left to figure out, and many awkward hybrids between traditional storytelling and notions of what games are or could be. Some game designers prefer to avoid overtly trying to tell their own stories through games at all, seeing the mixture of the two as oil and water.

As we continue to investigate the challenges and pitfalls of storytelling in games, we’ll use two primary ways to think about the intersection of story and games:

- **Authored story**—First, games can carry stories. The experience of playing a game can involve many different elements that help convey a story: images, animations, words, sound, and even the rules and processes of playing a game. By shaping these elements, the creator can tell a story. This kind of story, deliberately told through the experience of a game, is sometimes called an *authored story*. Let’s take a game we’ve already discussed as an example. The authored story of Janet Jumpjet is described in Chapter 2, “Verbs and Objects.” Mysterious, long-dormant robots left behind by an ancient civilization have awakened in the mines of Venus and taken human workers hostage. It’s up to Janet to explore the mines, rescue the hostages, and incapacitate the robots. Janet is clearly the main character of the story: it’s about what happens to her and what she does, even if she never says a word (much like some other well-known video game protagonists, such as Mario and *Half-Life*’s Gordon Freeman).

- **Emergent story**—Second, games can generate stories. The experience of playing a game, the push and pull of the player and the system, can generate a story that’s worth telling, just like a good conversation can. You can think of this as a story about the playing of a game. These stories are often unique to each player, and we call this kind of story an *emergent story*. The emergent story of a game is what we’ve spent a lot of this book talking about: it’s the experience that the player has while learning the game, exploring and understanding its system and spaces, and perhaps mastering or completing the game. The player’s story involves learning how to use verbs, which in Chapter 2 was described as the main characters of the emergent story. An emergent story is about exploring and figuring out systems with goals and rewards, deciding what to do, and often repeating one aspect of the game to understand it better and develop skills. The experience of flow and resistance is part of the player’s story, and it may be different for each player.

Which kind of story is better? Once again, there’s no right answer to that question—it all depends on your goals as the creator of a game and what drives you to create and experiment. Do you have a story of your own that you want to tell? Or do you want players to be able to discover their own stories through the act of playing? Are you interested in blending the ways we have to tell our own stories with the unique qualities of games—the ways that playing games lets players push into, interpret, act on, and perhaps even change the story they experience?
The rest of this chapter explores the techniques that game creators have used to tell stories, along a broad spectrum ranging from authored stories to emergent stories. You don’t need to think about that range as a single, straight line, however. There are almost as many ways to tell stories as there are stories to tell, and the intersection of storytelling and games is still relatively unexplored. Maybe you’ll discover an innovative way to tell stories or a way for new stories to emerge from systems at play.

**Authored Stories**

At the beginning of the authored end of the spectrum, it’s easy to understand what we mean by *story*. In its most straightforward, traditional form, a game’s story doesn’t need to be too different from the kinds of stories we experience through novels, comics, or films. It has a plot with a beginning, middle, and end, with characters who develop, experience conflicts, and perhaps resolve those conflicts.

If you want to tell a story in a way that resembles the forms used in less interactive media, there’s an awful lot of material out there already about how to proceed. You can find numerous books written for creators of novels, films, and comics that explain how to create a five-act structure, develop interesting characters, and incorporate concepts like “The Hero’s Journey” (a multistage plot structure that’s often found in the telling of grand, mythic adventures). All this material can be useful for games as well, in the sense that telling a compelling story can draw on similar techniques regardless of whether that story’s intended to be experienced in a movie theatre, while reading a book, or through the playing of a game. These traditional storytelling concepts are beyond the scope of this chapter, however, since we’re going to focus primarily on the unique intersection of game systems and story.

As the creator, everything you put into your game informs its story: all the components of context, for example, as discussed in Chapter 4, “Context.” The way a game looks and sounds can be the building blocks of the setting of the game, elements that help the player understand what’s going on. Elements of context can be simple enough to give a hint of story without being explicit, as in *Redder* (2010), which uses few words and many simple, pixelated images to create the feeling of exploring an alien planet. The ground looks red and arid, and you have to wear a spacesuit as you explore the world. Your ship is lacking crystals, which can be found deep in the tunnels that teem with dangerous machines (see Figure 7.2).

On the other hand, by pouring in a lot of context, it’s possible to create an extremely rich world with a history, nations of different peoples, and political struggles, even if the player doesn’t directly interact with or witness them, as in games like *Skyrim* (2011), which feature hundreds of books and artifacts that the player can read and inspect to learn more about the fictional setting of the game. The system of the game, its rules and verbs and objects to interact with, have a huge influence on the story, as we’ll discuss soon. First, let’s look at some ways that game creators have told authored stories in games.
Chapter 7

Story as Intermission

The term “cutscene” is often used to refer to sections of a game experience that are used solely to show noninteractive elements of a story to the player. The first games that cutscenes appeared in were arcade games like *Pac-Man* (1980), and they were simple animations that appeared after completing certain levels. *Pac-Man*’s cutscenes are short vignettes that show the characters of the story wordlessly acting out moments that the player will recognize from the game: the ghosts chase Pac-Man, who powers up and chases them back.

Interestingly, the original *Pac-Man* cutscenes let the creators express ideas about Pac-Man and the ghosts that never appear in the rest of the game. In one scene, Pac-Man grows enormous to show that he’s powered up and able to chase the ghosts; in another, the red ghost gets caught on a nail that tears his red covering, revealing a pink leg and foot underneath! These scenes were often referred to as *intermissions*. After pushing hard to complete a level, the player was given a break with something amusing to watch before continuing on.
The year after the original game came out, *Ms. Pac-Man* (1981) was released as a sequel. Now the intermissions were called *acts*. They told the story of how Pac-Man and Ms. Pac-Man met, fell in love, and had a child. Since then, cutscenes have grown more and more elaborate. In big-budget games, they sometimes add up to hours of video footage with dozens of characters, and they are often written by screenwriters with experience writing film scripts. Ironically, in some cases it’s not even necessary to play a game to experience these stories: enterprising players have stitched together all the cutscenes for story-heavy games like *Uncharted* (2007) and its sequels so that they can be watched on sites like YouTube as if they were films. The only sections of the authored story that a viewer ends up missing are the “action sequences” that comprise the system of the game. In the case of *Uncharted*, the action sequences are moments where the protagonist is shooting at enemies, climbing up walls, or solving puzzles to open gates.

The ability and desire to watch the entire story of a game without actually playing it raises a question: is a game the best way to experience an authored story like this? When the story carried by a game is mostly or entirely told through cutscenes, it’s almost as if they exist alongside each other; the player takes a break from one to experience the other, bouncing back and forth between playing the game and watching cutscenes. Is there a benefit to letting a game system and a story work in parallel, taking turns in the spotlight?

Some game creators prefer keeping story and game relatively separate, letting each part stand on its own merits precisely because of the difficulty of intermingling the two, as we’ll see in the rest of this chapter. There’s definitely something that’s left untouched with this method, however: the interesting, complicated possibilities that arise if you mix story and game.

Still, a game can benefit from the presence of a story alongside it, if only to provide breaks in resistance. Story can show what kind of imagined world the game exists in and help make sense of what’s happening—or even help create a feeling of nonsense or humor, for some games. In one of the first games I designed, *Egg vs. Chicken* (2006), I told a story through a series of comic-book pages that appear before and after each major section of the game. The game itself involves defending a series of fortresses against an oncoming army of chickens, who the player can defeat by flinging groups of eggs at them. The context of this challenge—eggs being used to defend against chickens—was clearly and deliberately surreal and nonsensical, so we decided to tell an equally ridiculous story to help explain it.

The comic-book pages star a group of four revolutionary eggs who refuse to hatch into chickens. Menaced by a chicken police force, they escape in a time machine to try to uncover the answer to the age-old question: which came first, the chicken or the egg? Like the ghost’s uncovered leg in *Pac-Man*, the four revolutionaries never appear in the game, but they help explain—in a manner just as wacky as the basic concept—why the enemy chickens the player encounters look like greedy nineteenth century industrialists, then medieval knights and
archbishops, and eventually Egyptian pharaohs. These images and animations, elements of context that appear during the play of the game, tie in with the noninteractive story elements that appear in the comics, creating a simple, silly world. The context isn’t strictly necessary for the game system itself. We could have also created a similar game using abstract enemies and defenders rather than chickens and eggs, but together, all the pieces of context and story create an experience with a uniquely ludicrous flavor.

Story as Exertion

Cutscenes like the animations of Pac-Man or the comic-book pages of Egg vs. Chicken show up when the player’s successfully completed a certain level, at a moment of rest and reward. They don’t necessarily have much to do with what the player just accomplished, which is why they often feel like an intermission. As short breaks from play, they often just involve watching or reading the story rather than interacting with a system. Because games almost always involve some level of interactivity and choice, it’s tempting to get the player more involved in the story. Could the player feel more like they’re part of the story? What if the story couldn’t proceed without them?

Adventure games, which started to appear in the 1970s and 1980s, usually put the player in control of a character who has to overcome various challenges to progress toward the end of the game. The earliest adventure games, like Adventure (1979) and Zork I (1980), had little in the way of story; the nameless adventurer was simply trying to find and collect every valuable treasure in the game world. Later adventure games started to provide more context in the form of other characters to talk to, who often give the protagonist quests to undertake. In King’s Quest (1984), the main character is a knight trying to find three treasures; along the way he meets a woodcutter whose wife is starving. This dilemma can be solved if the player finds a magic bowl that can create food, which fortunately happens to be lying on the ground not far away. In exchange, the woodcutters gives the knight a fiddle, which turns out to come in handy later for dealing with some angry leprechauns who can be pacified through music. By finding the correct solution to these problems and pushing into the game’s resistance, the player participates in the story and moves it forward.

Since then, many kinds of games have given players quests and undertakings to complete and drive the story of the game forward. In massively multiplayer online role-playing games (MMORPG) like World of Warcraft (2004), players experience sections of a particular character’s story piece by piece as they complete various tasks: locating missing items, slaying dozens of nearby enemies, carrying a message or package from one place in the game world to another. In single-player role-playing games, it’s often necessary to grind through many enemy battles in the game’s combat system before reaching the next area of the game where the protagonist can talk to new characters and find out what happens next in the overarching plot. Even social games such as Farmville (2009) and Cityville (2010) have realized the lure of storylines, creating
quest structures that give players a series of tasks and a snippet of conversation with characters between each task (see Figure 7.3).

Like the intermissions of Pac-Man, these pieces of story alternate with periods where the player pushes into the systems of the game and focuses on playing rather than experiencing a story. There’s a crucial difference: the core gameplay of Pac-Man doesn’t present the story as a rationale for why it’s necessary for Pac-Man to elude and devour ghosts while collecting every yellow pellet in the level. The intermissions appear as a break in the action rather than as its culmination and fulfillment. In games with elaborate series of quests, on the other hand, story is the driving reason why the player needs to push against the challenges of the game.

Although this creates a tighter integration between story and game systems, there’s a risk. As we discussed in Chapter 6, “Resistance,” the lure of rewards can come to eclipse the pleasure of the processes of play that lead to those rewards. If the player is more concerned with simply seeing the next part of the story, and if the act of playing and dealing with the challenges along the way isn’t an interesting enough conversation in its own right, then playing can become a chore. When playing involves repetition of low-skill, already-mastered activities (grinding), the problem becomes worse. It’s no wonder that some players who get bored with grinding, or frustrated by difficult puzzles and challenges, end up looking online for videos of the story, preferring to go directly to the reward.
When we interact with and experience story, there’s always a little bit of effort required of us as a member of the audience. At the very least, we have to keep our eyes open and pay attention in a darkened theater, or turn the pages of a book. Games, on the other hand, sometimes require much more labor and time to experience the stories embedded within them. The investment of effort can create emotional attachment because the players are involved in a much more significant way than if they were simply turning pages; they’ve worked hard to see the story proceed. This investment comes with risk, however. If the story disappoints in the end, players can feel let down, even robbed.

Even simpler forms of interactivity can become onerous when they end up feeling like barriers to the next section of story. Some of the games of the *Resident Evil* series feature *interactive cutscenes* that require the player to act in order for the scene to progress—in theory, bringing the player more directly into the drama. The cutscenes of *Resident Evil 5* (2009) include moments where the player has to press a button to leap over a pit, dodge falling pillars, or avoid enemy attack. If the player doesn’t press the correct button within a short time limit, the cutscene shows the protagonist of the game dying a horrible death, and the player’s forced to repeat the cutscene. This technique certainly requires the player to be “involved” and pay close attention for the crucial signal to quickly press the correct buttons, but many players express extreme annoyance at having to repeatedly watch these scenes when their timing was slightly off.

**Story as Exploration**

Another method of weaving story into a game sidesteps some of the issues of cutscenes: rather than alternating between a period of playing in the game system and watching another section of story, many games incorporate story elements that are available to players but not necessary to move the plot of the story forward. Instead, they’re optional. We’ve already mentioned games like *Skyrim* that detail vast fantasy worlds with long histories through books that players can read and objects they can examine. Many role-playing games that try to create the experience of traversing a rich world also include characters that the player can talk to—or at least use a “talk” verb on that produces some dialogue giving the player more details about that character or the setting. These story elements are similar to the more open spaces of resistance discussed in Chapter 6. They’re there for players to push into and explore, or move past and ignore as they see fit.

This kind of optional story material is sometimes referred to as *lore* because it frequently fills in the backstory of a game world. Lore tends to play a supporting role in the story of many games rather than creating a series of events that unfolds into a plot for the player to follow. Pieces of lore provide additional flavor for players who are interested in knowing more about the setting and who want to pursue the background and creative expression that makes up the game world.
Many games use exploratory story elements alongside a more traditional plot, expressed through the kinds of techniques described in previous sections. In other games, entire subplots are available as side-quests, which are not necessary for completing the game but create an option for a player to find out more about particular characters or aspects of the world. The more important these optional stories are to the narrative of the game, however, the less players are likely to see them as being purely optional. It’s hard to pinpoint exactly when an extra side-quest goes from being something you can ignore to a piece of the plot that’s vital to the experience.

It’s possible to play Benjamin Rivers’s horror-mystery game *Home* (2012) without discovering many fragments of story that are scattered along the way. In *Home*, the protagonist is an amnesiac who wakes up in a mysterious house next to a freshly murdered corpse. If the player explores thoroughly while guiding this amnesiac through tunnels, locked gates, and dark forests back to his house, she can piece together dozens of clues that add up to some kind of explanation of who the murderer is and how the protagonist came to be there (see Figure 7.4). On the other hand, the player could just focus on getting home. The decision of how thoroughly to explore, and what to make of all the fragmentary evidence, is left up to her.

![Figure 7.4](image)

*Figure 7.4* A mysterious discovery near the beginning of *Home*.

**Story as Choice**

All the techniques we’ve described so far in this chapter give players different ways to experience an authored story. Some moments of story feel like rewards for progressing through the game, while others might be optionally available through player choice. Because a game resembles a conversation with push and pull between the player and the system—perhaps more so than other forms of storytelling—it’s natural to ask whether the player can make meaningful choices that affect the story itself. If we’re trying to blend the craft of storytelling with the craft of game design, why not let the player change the course of the authored story?
The emergent story of her experience would then be affected by the choices she makes, by how she pushes into the game’s system.

Even before the beginnings of digital games, the idea of stories with choices was being explored in written literature. The 1941 short story “Examination of the Work of Herbert Quain,” by Jorge Luis Borges, describes an imaginary novel structured like a branching tree. After the first chapter, each of the next three chapters relate a different version of subsequent events, and each of those chapters diverges again into three more, so that the story has nine endings. Whereas a conventional narrative can be read linearly from beginning to end, this kind of work less resembles a straight line than a tree with many branches (see Figure 7.5).

![Figure 7.5](image.png)

*Figure 7.5*  The structure of an imaginary novel described in Borges’s “Examination of the Work of Herbert Quain.”

A few decades later, this narrative structure had started appearing in actual books—the best known being the *Choose Your Own Adventure* series, marketed to kids. These branching narratives were sometimes called *gamebooks*, for obvious reasons. They’re systems that players push into by making choices, often with the aim of reaching a happy ending, at least in the early books. It’s no surprise that videogames started to use branching stories as well, and for increasingly adult subject matter. In an inversion of the gamebook label, a game where the primary verb involves choosing which branch of the story to pursue next is sometimes called a *story-game*.

Text-only story-games like Zoe Quinn’s *Depression Quest* (2013) and Anna’s own *Encyclopedia Fuckme and the Case of the Vanishing Entree* (2011) carry on the tradition of gamebooks in digital form. The story is told in the second person, describing how you, the reader, experience scenarios that involve choices. After reading a section, these games ask the player to make a choice. When you visit your girlfriend’s house, will you eat dinner or make sexual advances?
When you wake up feeling depressed, will you struggle to get your work done or give up and do something else? In *Depression Quest*, some of the choices presented to the player are visible but unavailable, a way of conveying the limiting feeling of depression (see Figure 7.6). These kinds of choices—and even absence of choices—can feel powerful for players because they can potentially affect the resolution of the story. It’s exciting to imagine that, through picking one option or the other or figuring out how to unlock all the possible choices, you can change the course of events, creating a sad ending or a happy one for the characters involved. At the same time, it’s worth noting that nearly all branching stories are still authored stories. Although they have many paths that a player can explore through her actions, all the paths have been placed for her to discover.

![Depression Quest](image)

**Figure 7.6** Facing a decision in *Depression Quest*, including one unavailable choice.

Game creators sometimes talk about how we give players the *illusion of choice*. The conversation of a game is based on a structure we’ve created, and even the verbs at the player’s disposal, the ways she has to push into the system and mold her own experience, are predetermined.
When you play a story-game and explore every branch, replaying or returning to the same moments to make different choices, you can experience the totality of what the creators have made available to you, but it’s still a constrained choice.

These choices are a little bit like choosing what to eat off a restaurant’s menu. You can’t simply make up your own dish, but the availability of options is still meaningful since it lets you pick your own experience, and not everyone has the same taste. A branching story that lets players express their own preferences allows each person to look for the story she wants to pursue, within the branches that you’ve provided. Many people enjoy sweet, happy endings, just as many of us like sweet food (especially at the end of a meal), but players of games with multiple story endings can choose whether they want a happy ending or not. Some might choose different paths simply to see what happens, or because certain decisions simply work better within the narrative logic they perceive or bring a satisfying resolution to the struggles of the characters.

Sometimes it’s nice to choose what kind of story you’ll experience, just as it’s nice to choose what to eat for dinner. At other times, we can take pleasure in leaving those decisions to someone else, as in a dining experience with a set menu, or a traditional story without branches. Telling a good story is a skill, and crafting a multibranched story is a particularly complicated task for that skill. For one thing, branching stories simply have more story and naturally end up involving many more words, animations, or video to tell the story than a linear story that recounts one version of events. As a result, many creators of story-games try to limit the amount of effort and complexity involved by creating small branches—choices that cause the story to move off in one direction but reconverge into the main plot, or choices that happen near the end of the game, where a change in the plot can feel significant without involving a huge amount of additional storytelling.

Creators of story-games employ many kinds of techniques to create branching structures. One structure, sometimes called a shrub, gives players choices at every turn, resulting in many possible variations that continue to branch—and sometimes lead to abrupt or unresolved endings. (If you’ve read classic Choose Your Own Adventure books, many of the dead ends in those books involved your character dying.) A structure with reconverging branches tries to solve the issue of endlessly branching shrubs, which also require a lot of creation of plot and writing by having the branches split up and come back together. This sometimes means a relatively linear plot with a single resolution but multiple paths to reach the final outcome that can differ in their details and feel. Finally, many story-games end in a branching set of choices that result in different endings—a practical moment to create multiple branches, since each one ends and doesn’t need to continue branching or extending (see Figure 7.7).
Besides the quantity of story, there’s the question of quality. No matter the path taken, we want our stories to feel satisfying, with a plot and outcomes that make sense to the player’s intellect and imagination. In 2005, I was a game designer at a studio called Gamelab, working on the aforementioned Egg vs. Chicken. Another team at Gamelab was developing Plantasia (2005), in which the main character is a faerie who helps a gardener bring flowers into bloom. Plantasia’s designer, Nick Fortugno, originally intended the game’s story to culminate in a branching choice: does the faerie pursue a relationship with the gardener or leave the garden behind? Ultimately, he decided that a choice wouldn’t make sense in this story; the things the characters had gone through, the way they had developed and the events of the plot, all pointed toward a relationship as the ending that made the most sense. It wouldn’t have been hard to create an alternate ending where, despite those cues, the faerie decided to avoid romance, but in Nick’s opinion, it would have felt like an awkward, unsupported branch hanging off to the side, a vestigial limb.

By contrast, Emily Short’s game Floatpoint (2006) has a story constructed to lead up to a crucial moment—again, near the end of the game. The main character is a human diplomat who’s an envoy to an alien planet. Through playing, the player discovers that this diplomat must make a single choice that will send a message to the aliens and determine the course of their relationship with humanity. Much of Floatpoint is spent exploring an alien city to learn more about
its culture, history, and the current situation. Although it’s not a huge world, there are many significant yet optional story elements that can be discovered through exploration and puzzle-solving—or avoided, leaving the player with less understanding and a simpler set of options in the final choice. The striking thing about Floatpoint is that Short constructed the plot around a single turning point—a moment in history where one decision, flowing from limited snatches of cross-cultural understanding—makes a huge difference to the course of the future. As a result, the various outcomes of the diplomat’s choice (which can be experienced by replaying the pivotal scene) all feel like they flow naturally from the events of the story.

**Story as System**

So far, we’ve talked mostly about games that tell stories constructed out of the same materials used to tell stories in other cultural forms. We can make stories out of words, cartoon characters with speech bubbles, moving pictures. We can even use human actors for some kinds of non-digital games experienced at live events! As discussed at the beginning of this chapter, games have something unique to offer beyond traditional storytelling materials: a system of verbs, scenes, and rules that the player can push into and learn. Beyond the straightforward offer of a choice of which path to pursue next, the vocabulary of a game’s system can help convey a story through its very structure.

Many of the oldest games in history express something about the world and how it works through systems and mechanics. They often contain stories about overcoming conflict, solving problems, and pushing through difficulty to overcome a challenge. Chess can be seen as a story about two equal and opposing forces, each trying to defend a crucially important figure (the king). Mancala, an early board game from Africa, represents the cycle of planting seeds and harvesting. It’s crucial to decide what plot of land to take seeds from to start the next cycle. Games not only describe how certain scenarios work in our world—by creating a system that players can push into through the use of certain verbs. They also say something about what kinds of actions are important in those scenarios and what kinds of decisions make a critical difference.

Anna’s game dys4ia (2012) tells a story based on her own experiences as a transgender woman who decides to take hormones and shows how her own feelings, relationships, and ways of moving through the world are affected. dys4ia conveys this story in part through words and pictures that explain what’s going on in various scenes and facets from Anna’s life. At the same time, much of Anna’s experience—what it felt like to be her, in those situations—is also expressed through game mechanics (see Figure 7.8). These systems convey something that words wouldn’t on their own. In one scene, the player moves a pixelated character toward home while the text explains that medication has made her exhausted. The system shows this as well, creating more and more resistance to the player’s movement across the screen, slowing it to a crawl, and making the experience of exhaustion tangible.
In other scenes, the player controls an object similar to a Tetris piece that’s trying to pass through a gap in a wall but is strangely shaped and doesn’t fit. Even without a more literal representation of a human character, Anna’s experience of feeling wrong and awkward comes across clearly, especially as this scene recurs. Eventually, this aspect of the story reaches some measure of resolution. The player gets a chance to struggle against the wall and knock holes in it, and a brief scene at the end of the game holds out the promise that even an ever-changing object can make it to the other side.

Other kinds of messages can be conveyed through game mechanics as well. The Best Amendment (2013) is Paolo Pedercini’s response to the National Rifle Association’s assertion that “the only thing that stops a bad guy with a gun is a good guy with a gun.” The game seems simple at first. In each level you maneuver a white-hooded character to collect stars, sometimes by shooting black-hooded characters (see Figure 7.9). As the levels progress, the black-hooded characters start shooting as well, creating a dangerous playing field. Eventually, something starts to feel familiar about the movements and shooting of the black-hooded “bad guys with guns”: their behaviors turn out to be recordings of how the player moved and fired on previous levels! A scene that initially felt like a dangerous, chaotic firefight with a number of dark enemies turns out to be the result of your own actions while pursuing the goal (collecting stars) set forth by the game. The Best Amendment doesn’t explain its message with words, but in authoring a system that produces certain kinds of experiences when played, Pedercini gets an idea across: who’s a “good guy with a gun” depends on your perceptions, and running around shooting apparent “bad guys” leads to a general bloodbath.
Interpreted Stories

Whether expressed with words, images, and characters or through the vocabulary of a game’s system, games let us tell an incredible variety of authored stories. Game systems give us ways of getting a player involved in the progress and evolution of an authored story. The player might simply be pushing the story forward or deciding which branch of the story to explore. She may even discover parts of an authored story embedded in the game’s system by figuring out how it works and understanding what it has to say. In the previous chapter, we talked about how games can open up the shape of resistance to allow players to pursue their own strategies, even create their own goals. Can we open up stories in a similar way to get players involved not only as audiences for our authored stories, but as storytellers in their own right?

Each time a game is played, an experience results, generated by the player’s own process of pushing into the game. In many games with authored stories, this experience is relatively predictable; it may feel like nearly the same experience if played again. The process of playing
dys4ia is likely to be relatively similar for most players, and intentionally so: dys4ia aims to convey the lived experiences of a real person—events and situations that actually happened. It wouldn’t make sense for players to insert their own stories into dys4ia any more than it would be polite to interrupt an oral storyteller’s recounting of events in her life. Like spoken conversations, games can offer players moments to listen and moments to participate more actively; both are valuable in their own way.

Not all games aim to convey personal experiences, of course; some games create open spaces for players to define their own style of play or agenda, and these games can result in a huge variety of experiences as players interact with them in different ways. Open games we discussed in the previous chapter, such as The Sims (2000) and Minecraft (2009), produce different emergent stories for each player, depending on what those players seek to do in the game system and how they push against and into the rules. Because those rules create a structure that’s the same for every player, there are many commonalities. Each player’s emergent story is composed of some consistent building blocks that can be arranged in many different patterns.

**Interpretation**

Even at the authored end of our story spectrum, there are many ways to open a game’s story to the creativity and ingenuity of players. Traditional notions of an authored story describe a story as if it’s an object that’s simply delivered from the author to the audience, but those notions aren’t the only way to think about how a story comes into being. The Kuleshov Effect shows how powerful interpretation is. Depending on how elements are arranged, an audience may have wildly different interpretations of the same expression on an actor’s face.

Of course, interpretations of a story can vary even if two people experience the same story. That’s why we can argue about exactly what happened in a play like Shakespeare’s Hamlet after seeing it with our friends. Was the ghost of Hamlet’s father really a supernatural manifestation or some kind of hallucination or trick? Was Hamlet justified in his plot to murder his uncle, and was he pretending to be mad as his dialogue states, or did he truly become unhinged? Shakespeare may have had his own interpretation of what happened, but the author’s views don’t need to be the last word on the meaning of the play. Rather than thinking about a story as something produced entirely by an author and handed over to the audience, what if we thought of a story as coming into being at the moment of interpretation?

Games lend themselves well to ambiguity, in part because players can become conscious of the way their actions in the game create a different experience, even slightly so, from those of another player. Using the same techniques and tools as stories told in other cultural forms, game creators can leave elements of the story untold—mysterious and open to interpretation. Home is a great example that we’ve already discussed. The story is a mystery that can be seen in many different ways, and although the authored content stays the same, each player may find
more or fewer pieces of the story depending on how thoroughly she explores. Benjamin Rivers, the game's creator, deliberately left the story of Home completely open to interpretation and even prompts players to actively come up with their own ideas. After completing Home, players are asked to visit the game's website and fill out a form to submit their own explanation of the story. In the month after the game's release, dozens of possible interpretations accumulated (see Figure 7.10).

Figure 7.10  Home's website asks players to provide their own interpretation of the story.

Stories told through game systems lend themselves well to interpretation, precisely because they're partly told without words: players experience this aspect of a game's story by pushing into a system, using verbs and seeing what happens, and feeling out the contours of how the game works. Although the mechanics may stay the same, different players may reach different understandings of what the systems are trying to say.

Pipe Trouble (2013) is a game where the player is tasked with laying sections of natural gas pipeline in rural and suburban areas of Canada. On either side of the main playing area, two characters express disapproval when things go wrong and let you know how happy or unhappy
they are with how you completed the pipeline. On the left side, a farmer complains when the pipe runs too close to fields or scares farm animals; on the right, a businessman gets angry if the pipeline isn’t completed fast enough or uses too many pipes and goes over budget (see Figure 7.11).

It’s difficult to keep both sides happy, especially considering that other factors appear during play: protesters show up to block your pipeline if you build it over forested areas and may even sabotage your pipeline by blowing it up if you’re too reckless with the environment. Although Pipe Trouble is clear about whether the farmer and businessman are pleased, it’s up to the player to decide on the right way to play. Is the best measure of success to keep everyone happy? To save the most money possible? To let the businessman get upset but make sure not to disrupt farms, homes, and forests? The many possible interpretations of the right way to play are useful for creating a complex systemic story. It’s hard to keep everyone happy, and a natural gas pipeline ends up affecting someone negatively, whether it’s a forest animal or a tycoon’s checkbook.

The branching narratives of story-games can also create interesting forms of ambiguity, especially when the system underlying the impact of the player’s choices isn’t completely revealed
to the player. In Emily Short’s *Bee* (2012), the player makes choices about how to use the time of the main character, a home-schooled girl who’s studying to become a spelling-bee champion. At the beginning of the game, the player is shown two attributes that are affected by her choices: study more, and the Spelling Skill attribute will rise, but the Motivation attribute will decrease. If Motivation is too low, some study-related choices become unavailable, but Motivation can be raised by pursuing other kinds of activities (see Figure 7.12).

![Figure 7.12](image)

*Figure 7.12* Making choices in *Bee* sometimes affects the characters attributes, at left.

Although Spelling Skill and Motivation seem like the focal points of the game and its stated goal, other parts of the system are affected by the player’s choices as well—most notably the relationship of the main character to her parents, sister, and other peers. Interestingly enough, many of the outcomes of the story—some of which describe what happens years later or involve abandoning spelling mastery altogether—are linked to what kind of relationship the main character has with others. *Bee* must be played several times to feel out the contours of this system to interpret what’s going on in this girl’s life. Although the game presents a straightforward narrative of overcoming difficulty, increasing skill and mastering problems to become a
champion, the decisions that feel like they change the story suggest that the game may contain an underlying message about human relationships and life beyond the narrow constraints of a simple goal.

**Reflective Choices**

In talking about story-games, we’ve focused so far on choices and options that the player deals with to push the story down one branch or another, potentially even changing the ending of the story. It’s understandable that these kinds of plot-altering choices get a lot of attention in discussions of story and games. When we’re involved in an unfolding narrative or a system that we can act in, we want to know how we can make a difference. What do we have to do to make sure our favorite character doesn’t die? Which choice spells the difference between a good ending and a bad one?

Plot-altering choices aren’t the only kind of choice that contributes to a player’s emergent experience of a game, however. Another kind of choice, which some story-game creators have started calling a *reflective choice*, has huge potential to involve the imagination, interpretation, and psychology of the player—even though these choices don’t affect the plot of the story, or the state of the game, in any way.

Near the beginning of *Choice of Romance* (2010), a story-game about a young noble navigating the social intrigues, politics, and relationships of a royal court, the player is asked to make what sounds like a significant choice. The young noble spots a purple butterfly, said to bring good luck, and the player decides on a wish the noble will make. Will your character wish for money? Adventure? True love? Or to do something amazing that will change the world? If we assumed this choice was plot-altering, we can imagine what kind of impact it could have on the story. Maybe a noble who chose true love would be more likely later on to have an epic romance or even complete the game upon reaching that goal.

The truth, although it isn’t revealed to the player, is that this choice doesn’t affect anything else in the game or its story in any way, and that’s what a reflective choice is: a choice that exists primarily to focus the player’s attention on the act of making a choice. In *Choice of Romance*, the player can end up pursuing any or all of those goals, regardless of the initial wish, but that wish serves to make the player think about what’s important, what she wants to pursue in this story or at least this particular playthrough of the game.

Reflective choices may seem like a deception or a cop-out, especially because they require far less work to build into a game than a plot-altering choice. That point of view, however, only makes sense if we’re starting from the idea that every choice in a game *has* to affect the state of the game and that everything else is meaningless. An attitude like that does make sense for many games, where the focus of choice is on strategies that could create a winning or a losing outcome. In chess, deciding to point the horse-head of your knight forward or backward won’t
help you win or lose; it’s the opposite of an important choice. When the meanings and interpretations of a story become intertwined with a game, however, the act of choosing becomes more complicated. Not every action a character makes in a traditional story changes the fate of the world or means the difference between life or death, a good ending or a bad one. Instead, many things a fictional character might do or even think are reflections of who that character is, how she reacts, and what kind of person she is.

*The Walking Dead* (2012), a game based on the comic book series by the same name, includes many examples of reflective choices. The setting of *The Walking Dead* is the United States during and after a zombie apocalypse. The fates of many characters are extremely bleak in the comic book as well as the videogame and television series based on it. In the game, the player controls the choices of Lee Everett, a convicted felon who escaped during the outbreak and joins up with a group of survivors. In the second chapter of the game, Lee meets a woman who’s been infected by a zombie bite; she’s sadly awaiting the worse-than-death fate of becoming a zombie. The choice to make is awful: she wants you to give her a gun so she can commit suicide. The player must decide whether to give her one or refuse (see Figure 7.13).

![Figure 7.13](image-url) 

*Figure 7.13*  Making a difficult and memorable choice in *The Walking Dead.*

This difficult choice turns out to be mostly reflective, because even if the player refuses, the woman grabs a gun and commits suicide. The experience of having to make this choice, however, was a memorable one for many players, despite not having any way to create a positive outcome. *The Walking Dead* is full of choices and situations like this, from deciding whether to bury a young boy’s corpse to whether to listen to a dying man’s final words. Reflective choices may come naturally to a story about survival in such a grim setting where there’s no happy ending in sight. In such circumstances, the game seems to suggest, what’s important is how you react to the harshness of reality and what kind of attitude you have no matter whether you can change the outcome or not.

If choices don’t necessarily need to affect the outcome of a game or the course of its story, we can consider whether many kinds of apparently “small” choices can play a role in affecting the emergent experiences of a game’s players. Many games give players the opportunity to decide what the character or avatar they control will look like—whether to play as male or female,
whether to be embodied in a game as someone who looks a bit like you or an idealized version of yourself, or completely different. In some games, choices about appearance or gender of the main character have an impact on a game’s systems. In others, the plot and state of the game are relatively unaffected. Still, the experience that emerges from watching an avatar die may be very different if that avatar looks exactly like you!

The *Mass Effect* series intersperses sections of exploring and shooting with moments where your character (Commander Shepard) converses with others, and the player frequently has to make choices about what to say. Some are reflective choices, while others drastically alter the course of the game’s story, result in the death of major characters, or alter your character’s attributes. The game’s most significant and widely discussed reflective choice, however, may be the choice of the main character’s gender, which the player makes as the game begins. Notably, the rest of the choices in the game aren’t affected by the player’s choice of gender. The character says exactly the same lines, simply voiced by a different actor. The experience of playing a female Shepard has been described by many players as being distinct and novel, however—perhaps because she has the same choices to react in all the same ways to the epic situations and conversations as her male counterpart would.

**Emotional Resonance**

*Diner Dash* (2004), another game developed at Gamelab and designed by Nick Fortugno, revolves around keeping customers happy. The busy waitress/manager of a restaurant, the main character has to juggle seating customers, taking orders, delivering food, and handling customers’ bills. The longer customers wait, the more impatient and upset they get, which is represented by a change in facial expression. In a study on *Diner Dash* players, game researcher Nicole Lazzaro found that this simple representation of emotion was effective in changing the feel of the game. Players experienced emotions of their own when the way they played resulted in happy characters or frustrated ones, because as human beings we naturally respond to the feelings of others. Even a cartoon representation of an angry, impatient person will make us respond differently than an abstract timer.

*Miss Management* (2007) was a game that Nick and I collaborated on as a follow-up to *Diner Dash*; part of our goal was to further explore the intersection of character-driven emotion, stories in games, and the emergent story of systems. In *Miss Management*, the player directs several unique, authored characters—all coworkers in a busy office. Each character gets stressed out while completing work assignments, and each has her own likes and dislikes. One might want to microwave a snack to relieve stress, while another becomes even more stressed out by the smell of food (see Figure 7.14). It’s up to the player to juggle these conflicting needs and complete a series of tasks in each level of the game that relate to those needs: make sure that Timothy spends a certain amount of time snacking, but don’t let Tara get stressed out, and complete 10 work assignments while you’re at it!
Each level’s tasks are introduced by scenes that play out in dialogue between the characters. Although these cutscenes are noninteractive, forming the authored story of the game, they also provide context and explanation for the player’s challenges during the rest of gameplay. When a player decides to make Tara happier or let Timothy get impatient, those decisions feel more meaningful because of the way they’re embedded in a longer story about the conflicts and development of these coworkers. Some of the tasks on many of the levels are optional: the player can earn extra recognition (in the form of a gold star, a simple cosmetic reward) for the difficulty of juggling all the tasks, but it’s up to the player to determine how hard she can push and which goals feel important to her. The overarching theme of “can you really keep everyone happy, and is it worth it?” also becomes the main question for the struggles of the story’s main character (Denise, the office manager) by the end of the game.

Of course, not all characters in games have authored plot arcs and character development, but we don’t necessarily need to use those traditional elements of story for players to care about the characters whose actions they guide. In war games like *Risk*, chess, or *Axis & Allies*, players make decisions that represent military movements, often sacrificing pieces or sending abstracted soldiers to their deaths. Very few players get emotionally attached to these stylized armies or feel remorse or sadness for their imagined deaths beyond “argh, that was a stupid move!” This is part of the point of play: there’s no real loss or death in failure.

When we experience a well-told story, however, we enjoy being swept up in the lives and emotions of the characters involved, even if they’re imaginary. We can feel pride in their struggles, sadness at their experiences of loss or death. What about characters in less authored, more emergent stories, who aren’t part of a preordained plot? Grunts and peons are some of the basic units of games in the *Warcraft* series, commanded by the player to build and fight. They die frequently, but they’re generic and replaceable, so these deaths carry little emotional weight. Other characters in games like *Warcraft III* have names and personality and speak lines...
of dialogue, but when these “hero” characters die, they can be brought back to life with an expenditure of resources and go on to speak their assigned lines during the rest of the story.

In other games, the emergent role of characters who can fight or die becomes a little more complex. In *X-Com: Enemy Unknown* (2012), the soldiers start off with random names, ethnicity, and gender. If they die during one of the game’s battles against Earth-invading aliens, they’re gone forever but can be replaced by hiring a new soldier. Unlike generic grunts, however, *X-Com’s* soldiers become more individualized over time. As they gain combat experience, they specialize in certain roles and are granted nicknames based on their actions. Before long, a player’s squad has unique characters who might have names like Alex “Boom Boom” Cheng, who uses heavy weapons, or Michelle “Banzai” Rodriguez, who’s known for running right up to her enemies.

These soldiers aren’t the same characters as those commanded by other players of the same game, and they don’t need to speak lines of dialogue to feel like personalities. Their character emerges from a combination of purely contextual (and randomized) elements like name and appearance and events that happen due to the game’s mechanics: remember that time when Banzai ran right up to that Berserker alien, and Boom Boom finished it off with a grenade that nearly killed her? Because these soldiers are individuals who can’t simply be brought back to life, players have described feeling scared when they’re in danger, sad when they die—even refusing to accept a favorite character’s death and reloading the game to avoid it. Far more than generic grunts, *X-Com* soldiers and their personalities become part of the stories that gamers tell about what happened when they played: the emergent story of the game.

The experiences and feelings of soldiers in *X-Com*, impatient customers in *Diner Dash*, and Sims in *The Sims* don’t need to be conveyed by an authored script. Players will react creatively to fill in the blanks, to imagine that Michelle “Banzai” Rodriguez has a hotheaded personality, or even a backstory that explains her recklessness. Players will project their own experiences of relationships and living situations onto events that arise from the system of *The Sims*; although each Sim is in some sense a stack of numbers running in the code of the game, associated with an arrangement of pixels and polygons on a screen, the human-like quality of how it all comes together is enough for human minds to connect the dots. Just as we can perceive a smiling face out of an arrangement of dots and lines (:-)) or an emotional scene out of Kuleshov’s juxtaposition of images, we can perceive a story with someone we can relate to in the situations that arise from games.

### Open Stories

When we discuss interpretation of stories and the activation of imagination to perceive a story in a system’s arrangement, we’re discussing a particular kind of emergent story. It arises out of the combination of authored elements (a character’s smiling face, or a nickname that’s assigned
to soldiers who charge in) with the player’s perceptions and actions. The magic of this kind of emergent story is that it results from the conversation between what we’ve provided as game creators and the individual experience of play. If we travel even further down our game-story spectrum toward emergence, we find open stories, a different kind of storytelling in games with fewer controlled and authored elements, where players create their own stories.

The emergent story of a game is exactly what most of this book discusses: it’s the story of a particular conversation that happens as a particular player figures out how to use verbs, when to use them with various objects in the context of a scene, and how to push into a game’s resistance toward goals and rewards, whether established by the game or their own motivations. The emergent story is the tale of what happened when that player jumped into the game and started doing things. Some emergent stories are boring and short, even hilariously so: I started playing, ran to the right, and tried to jump over a pit, but I fell in and died, so I quit playing. (Fortunately, most players don’t quit quite as easily.) Other stories may emerge from play but are nearly the same every time, regardless of who’s playing or how many times they play. These stories emerge from relatively predictable systems.

If you want to tell a particular authored story with a game—or convey a message of your choosing, which may be an important one—a predictable system may serve you well, even if the message it carries is ambiguous and open to interpretation. If, on the other hand, you want the emergent story to be more unique to the player, it’s worth considering ways of creating even more openness and unpredictability. Stories that are wide open to player involvement or imagination are inherently difficult to control as a creator. Making a system that can produce them means letting go of the traditional idea of authorship, of the creative goal of creating and delivering a message. Instead, as the game’s creator, you become the facilitator of new conversations—one that you never might have expected.

By their nature, emergent stories are open and unpredictable. They move beyond the limits of what you’ve created and into the space around a game, where players become creators themselves. That doesn’t necessarily mean that emergent stories are better, more moving, meaningful stories than authored stories; in fact, they’re often not what anyone would call a “good story” if measuring by the yardstick of traditional storytelling. But why measure that way? What emergent stories are is a different kind of thing entirely: still stories, still part of our human tradition of having experiences and telling tales about it, but as many and varied as there are people who play.

Sharing Authorship

There are many ways to create an open space that a game’s stories can grow into. The most straightforward is always available, even to stories told in other media. If you tell a good story, it grows in the telling, is retold and changed by those who tell it. By focusing your creativity and efforts on creating a rich, interesting world with memorable characters and events, you’re
creating something that may inspire others to extend it. This is true of the worlds of written works; the *Harry Potter* books have inspired thousands of works of fan fiction. Many of the tools to extend a fictional universe, or continue telling the stories of its characters, are available to audiences already. Fan writers and artists do so with words and images.

As a game creator, you have an additional option: you can open up your code and tools so that your players can become “fan” game designers and programmers. You can even create or refine tools to let players do this, although designing and building tools that make this easier for players can often be as much or more work as creating a game. Many open-world games, including ones we’ve already discussed like *Skyrim* and *Fallout: New Vegas*, come with tools that help players extend those worlds with mods that include new characters, scenarios and quests, different kinds of weapons, and even changes to the systems of the game. By putting the evolution of game worlds in the hands of players who become modders, those games continue to live on and be played for much longer than they would have if they were limited to only the original authored content.

Since the early days of digital games, creators have sometimes included level editors that let players become designers. *Lode Runner* (1983) is an example we discussed in Chapter 6. Even as a child, I was able to learn how to use its level-editing system, getting inspiration not only from trial and error but from the examples and techniques used in the levels that were built into the game by its creators. *Lode Runner* has a simple story, not much more than a premise. Games that involve worlds full of story and character, and then invite players to extend those worlds, give players sparks for their imagination to build on.

Games have a rich tradition of creating and extending worlds, going all the way back to nondigital role-playing games like *Dungeons & Dragons*. Played with dice, pen, and paper, the purchased materials of the game provide a set of rules to play by along with some ideas about story and setting, scenes and objects. One of the players in a traditional nondigital role-playing game is more like a game designer: the dungeon master or game master, who often acts like a modder. She extends the materials of the game with her own ideas, perhaps changing the rules along the way, and can dream up her own worlds for a story that’s a collaborative creation forged by her and the other players through playing.

In recent years, more and more digital games have been trying to appeal to potential players with their ability to be extended with stories and content made by players, for other players. *Shadowrun Returns* (2013) is a digital role-playing game based on a pen-and-paper roleplaying game. In that tradition, it was released with a single, relatively short piece of authored content, a scenario with quests and objects that can be played like any other game, but which also serve as an example to take apart, study, and use as materials for new scenarios. Beyond the authored content, the promise of *Shadowrun Returns* is largely based on what the creators of the game hope players will do with the game system and the tools they’ve provided to extend it (see Figure 7.15).
System Complexity

Even novels and children’s books can create imaginary worlds that activate the imagination and invite extension, but once again, we can look to the underlying structure of games to find something more unique: the unpredictable nature of complex systems. If we want many different players to experience their own uniquely emergent stories, a complex system of many parts that interact with each other is invaluable. A complex system often has many verbs, and many objects for them to act on, so that every possible combination can’t be easily known or plotted out in advance. This creates a space of possibilities that can be explored, where players can have the thrill of discovering something new.

Sheer quantity of verbs, objects, and combinations isn’t the key to complexity, however. What’s important is the relationship between them—the fact that different elements in the system influence each other. Although a full discussion of complexity and the design of complex systems is beyond the scope of this chapter, here’s a simple example. Imagine that a game of fantasy combat gives its players a verb like “hit” and objects that include the Uberknight, controlled by the player, and a type of enemy called a Bandersnatch. These objects have an attribute called Health that is reduced by “hitting,” and which, if reduced to zero, eliminates the object from the game. (This system, which originated with games like Dungeons & Dragons, should sound pretty familiar to you if you’ve played games with combat systems.) Each Bandersnatch will try to “hit” the Uberknight until she’s dead—it takes about four “hits”—but can itself be slain in two “hits.” This is a simple combat system, with just one verb and a couple objects, but it already includes many rules and relationships!
Now imagine that the Uberknight has another verb: “deathwail,” which can kill a Bandersnatch in just one hit. Deathwail has a restriction, however. It can only be used if the Uberknight is close to death, with less than 30% of her Health remaining. All of a sudden, there are a couple ways to play the game—different strategies that players can pursue and, in doing so, create slightly different emergent stories of their time playing the game. The player can “hit” the Bandersnatches she encounters until they’re dead, or she can wait until a Bandersnatch has reduced her Health enough to “deathwail”—a more powerful and quicker way to eliminate her enemies, but one that’s more risky as well. The differences between these verbs arises from their interaction with other rules of the game (like the one that says you’re eliminated if your Health reaches zero) as well as objects in the game and their properties. (Bandersnatches take two “hits” to kill, but Uberknights take five.)

Of course, the exact details of how the emergent story will play out, and what strategies are interesting to pursue, depend on even more rules, some of which you might already be wondering about if you enjoy playing this kind of game. For example, who “hits” first? Is it random? Are there verbs that affect this? How about regaining lost health: does it return over time, or are there even more verbs? Even in a simple system, it’s easy to see how adding “deathwail” makes for a more complex system than one which just included “hit,” and we can imagine how adding more rules would open up the space of possibilities even further.

We’ve already mentioned some examples of very open games in Chapter 6: games like *The Sims* or *Animal Crossing* (2001), which let the players pick their own goals to pursue amidst a system of many verbs and choices, and games like *Minecraft* or *Dwarf Fortress* (2006), which have complex systems for players to explore, and even come up with their own goals.

It’s worth noting that complexity isn’t the same as simple unpredictability of the kind that’s produced by randomness, as in the toss of a die. Roulette is a highly unpredictable, random game; as the ball bounces around, there are dozens of pockets on the spinning wheel where it might land. As a system, it’s not complex at all: you pick a pocket or a category of pockets (like red, black, or under 15), and if the ball lands there, you win. Betting and odds are what make roulette minimally interesting, but the system is simple: there aren’t that many elements of vocabulary that can interact to create something new.

**Multiplayer Complexity**

There’s one more element that helps a game become highly unpredictable and lends itself well to the emergence of stories that can be told and retold: other players. Multiplayer games have been the rule rather than the exception for most of history. Games have a tradition of social interaction, both in and around play. If you want unique, complex circumstances to arise, it’s hard to create something more consistently unpredictable than what happens when you throw two or more people together.
The complexity of a game’s system still matters a great deal. Tic-tac-toe can be played by two human beings but has a simple and easily-mastered system that becomes very predictable. It produces few if any novel emergent stories for anyone who’s played more than a handful of games. When players push into a complex system with many possibilities and potential strategies, however, they can surprise each other and (hopefully) even the game’s creators.

The presence of other humans in the space of play can be inspiring for our creativity and ingenuity. When we’re motivated to beat a human opponent in a competitive game, we’re aware that our own unpredictability can be an asset. Especially in games of head-to-head competition, where our way of playing can negatively or positively affect our competition, the element of surprise can be crucial. As a result, we experiment, coming up with new things to try out and throw at our opponent.

At the same time, we try to envision what our opponent is thinking, what they understand about the game and how they’ll act. (This attempt to read the opponent’s mind is sometimes described with the Japanese word yomi.) On top of that, multiple players engage in this mental maneuvering at the same time; you’re trying to guess what the other players are planning while knowing that they know that you know the possibilities they might be planning. Frank Lantz, an eminent game designer and theorist, calls this tangle of complexity donkey space, and it creates the most beautifully human aspects of unpredictability in games—qualities that really can’t be replicated with computer code.

The playing of multiplayer games, whether cooperative or competitive, is also an inherently social act. We’re never just making moves in a game system that we share with another human player; we’re also saying something to the other player, even without words. Skilled players of a complex game can wordlessly express many things in how they use the verbs of game: wariness, mercy, the aggression of a quick onslaught, even ideas like “I’m just toying with you” or “Let’s get this over with.” The conversational nature of games becomes even clearer when there’s more than one live participant in the conversation, using the structure and tools that the creator of the game, the facilitator of the conversation, has provided.

The emergent stories of a great game session can be immensely powerful: stories about an unexpected turnaround, a clever move that wasn’t anticipated by the opponent. In these stories, the players are protagonists, and the feelings we see on their faces in the exultation of victory or the agony of defeat are real feelings of other human beings. That may be why they’re told again and again and why the authored story of a game like Tekken (1994), which features many unusual and memorable characters struggling with their own fictional conflicts in a global fighting championship, is often eclipsed for Tekken’s community of players by the emergent stories that are created by one human player struggling against and defeating another.
Games and stories have both been vital parts of human culture and expression throughout our history. As game creators have begun to explore ways of combining the two in recent decades, we’ve found that games can help us tell stories in unique ways, although the intersection between the two can be tricky to master.

Games can carry authored stories, much like other more traditional ways of telling stories through words and images. If you want to tell an authored story, there’s much to learn from techniques used by storytellers who’ve expressed themselves through forms like novels, comic books, and films.

Games can also produce emergent stories. These are the stories about the playing of a game, often unique to a particular player or a particular time a game was played. They’re the stories that happen when players push into the shape of a game system’s resistance, make decisions, and understand the system through learning to use its verbs and engage with other elements of a game’s vocabulary.

Neither type of story is necessarily better, and both can lead to interesting conversations that involve the creator of a game and its player. Leaning toward authorship, emergence, or a combination of the two depends on what you hope to accomplish with a game as its creator: do you have your own story to tell, that players can listen to? Do you want to open up a space for players to experience and tell their own stories?

There are many ways to weave an authored story into a game: you can tell a story alongside a game, in noninteractive cutscenes that can take the form of animations, characters speaking dialogue, or even wordless images. To create a story that feels more integrated with the game, it’s possible to frame the story in such a way that the player feels driven to push the story forward and work to reach the next section of story as a reward. This has its pitfalls, however: the lure of the reward could become more compelling than the journey to get there through your game, especially if your game involves a lot of rote grinding!

Exploratory elements of story can be spread throughout the space of a game in ways that let players choose whether to look for them, experience them, and find out more about a game’s setting, backstory, or characters. Because exploratory story elements are optional, they’re usually used to add flavor to the game world rather than to advance the story’s plot.

Branching stories in game books and story-games give players choices that take them down one of many available paths in the story, perhaps leading to multiple different outcomes. Although it’s hard to make every branch feel like a compelling story and it can take a lot of work to create widely divergent branches, this kind of storytelling can give players a way to find and pick a story that suits them best or explore all the possible branches. Although a branching story is still an authored story, it involves the player in a deeper way by asking her which version she likes the best.
Games can tell stories in a unique way through their mechanics. As a player pushes into the resistance of a game, she comes to understand how a system works and where she can use verbs to affect it. By shaping a game’s system, its creator can express something about how the world works—even how it feels to be in a particular situation.

Interpretation is a vital part of how stories are conveyed and how meaning is produced out of stories—not only by the author of a story, but by the way a reader, viewer, or player understands the story. Ambiguity in storytelling leaves some aspects of the story open, so that the potential meanings of the story, even the nature of what happened, is left partly up to the audience’s imagination.

Emotional hooks in storytelling, even expressed in simple ways such as the names and facial expressions of characters, give players the chance to engage their own empathy and connect the dots into a story that has meaning for them.

Reflective choices show that decisions in a game don’t need to change the game’s state or outcome to affect the experience and make it meaningful. Reflection can pose deeply important questions to the player. What kind of person are you in this story? How will you react in this situation? What’s important, and what are your goals? Even if the answers don’t alter the outcome, the process of asking and answering changes the player’s relationship to what happens in the story.

There are many ways to open up a game so that it can produce a variety of emergent stories, in addition to or instead of an authored story. Most obviously, games and tools that accompany games can help players become creators in their own right, extending an existing authored story-world or coming up with their own.

Games can produce many different emergent stories through the workings of complex systems as well. When verbs and other vocabulary elements of games can intersect in many different ways, the space of possible experiences in the game, and the number of stories that emerge from those experiences, grows larger.

Some of the richest complexity and uncertainty available to us through games can come from the interaction of human players. When multiple minds engage in and have a conversation through a game system, whether it involves conflict or cooperation, the experience becomes social and can produce many compelling, emergent stories that are worth telling.

Discussion Activities

1. Think of and retell some memorable stories that you’ve experienced in a game—ones that really stick with you. Are these authored or emergent stories? Think of both kinds, and discuss what makes each kind of story memorable and distinct.
2. Do stories need to affect the outcome of the game to feel meaningful? Think about games you’ve played and a situation where it felt difficult to decide what to do. What hinged on the outcome? Is it meaningful for you make reflective choices, such as ones that change what your game’s avatar looks like but don’t affect the story? Why or why not?

3. Discuss a story that you and someone else you know, like a friend or relative, both experienced. Did you interpret the meaning of the story, or what happened in the story, differently? Why?

4. Have you had experiences while playing a game where the story felt irrelevant to what you were doing? How about a choice that didn’t feel significant, or was just annoying or distracting to what you wanted to be doing? Why was this, and how do you think the experience could have been improved?

Group Activity

We’ve already described the story of Janet Jumpjet, involving ancient robots that come to life deep in the mines of Venus and start kidnapping miners. Work in a group to figure out ways that this story could be told in that particular game. You could use cutscenes, create characters in the story who interact with Janet, find ways of including exploratory story elements, or create branching story choices. Which way of storytelling in this game feels the most satisfying to you, and why?

Now come up with an entirely different setting for Janet Jumpjet, using the same game mechanics that have been described for that game in earlier chapters or that you added to it in an earlier exercise. Instead of a space hero who fights robots in the mines of Venus, can you tell a story where Janet is a pirate queen, a wolf, a high school student, or even an ancient Venusian robot? What would you need to change about the way the game’s system works to go better with this story? What storytelling techniques would make sense for your new story?