

3 Game Elements: The Language of Values

with Jonathan Belman

Games embody beliefs from a time and place, provide a sample of what is important to a particular group of makers and players, and offer us a way to understand what ideas and meanings are valuable. These beliefs may be investigated as part of the system on which a game operates—through rules, customs, player options, and more. In short, there are many elements in a game, and each affects how games access, represent, and foster particular values.

The many interrelated elements or dimensions of a game—narrative, interface, interactions, mechanics, and more—contribute to a coherent play experience. Any of these elements can have cultural, ethical, and political significance, even when they appear to be value-neutral.¹ Sometimes the values at play in an element are relatively obvious. It would be uncontroversial, for example, to argue that the representation of *Tomb Raider's* (Core Design 1996) Lara Croft as a hypersexualized archeologist adventurer is deeply value-laden. By contrast, it is less immediately obvious how a particular game engine encourages violent play over nonviolent play.

This chapter presents a framework of fifteen elements that together constitute a game's semantic architecture, that is, the way that a game generates meanings.² These fifteen elements, by no means exhaustive, are offered with two purposes in mind. First, they can help designers locate specific ways in which values may be conveyed in games. Second, the elements can serve as a checklist of semantic architecture to encourage alertness toward aspects of a design-in-progress that have cultural, ethical, and political resonances, and as an aid throughout the design process. These fifteen elements are:

1. Narrative premise and goals
2. Characters
3. Actions in game

4. Player choice
5. Rules for interaction with other players and nonplayable characters
6. Rules for interaction with the environment
7. Point of view
8. Hardware
9. Interface
10. Game engine and software
11. Context of play
12. Rewards
13. Strategies
14. Game maps
15. Aesthetics

Although game elements are analytically distinct, they are not experienced individually by players, who are influenced by the context of the game; these elements tend to be thoroughly intertwined. Just as the word *shooting* means one thing in a conversation about gang violence and another in a conversation about photography, the shooting mechanic in the anti-war news game *September 12th* (Powerful Robot Games 2003) means something different from its counterpart in the commercial first-person shooter *Call of Duty 4: Modern Warfare* (Activision 2007). In general, elements that are considered independently may suggest a variety of meanings and values, but in the context of a game they may guide interpretation toward a limited range of meanings and values. We have selected the framework of game elements as a particular way of analyzing games because it useful for understanding the emergence of values. The framework is informed by our research with the Values at Play project, our experiences as game designers and educators, and much prior work in game studies and narrative studies.³ Indeed, Values at Play belongs to a field-wide conversation about game elements. For example, Staffan Björk and Jussi Holopainen (2005) have examined game design patterns. Also of note are the mechanics, dynamics, and aesthetics (MDA) framework of Robin Hunicke, Marc LeBlanc, and Robert Zubek (2004); the formal and dramatic elements and system dynamics framework of Tracy Fullerton, Christopher Swain, and Steven Hoffman (2008); and Jesse Schell's (2008) lenses metaphor. Values at Play recognizes a debt to these works, which offer distinctive insights into how to parse games and how to analyze the complex activity of game design.

Building on these ideas, the framework of elements that we have developed is particularly useful in theory and practice when addressing the values that are at play in games. More detailed than most other models, ours

allows for a nuanced reading of values in relation to each individual element and assumes that values also may emerge from interactions between two or more elements. The framework provides a structure for analyzing existing games and designing new ones. After briefly describing each element, we present innovative or exciting applications of both in the service of Values at Play.

1. Narrative Premise and Goals

What is the story? What goals or motivations drive the playable or player character (that is, the character controlled by the person playing the game, shortened to PC)? Who or what is the playable character pursuing, and what happens along the way? How are the events ordered? What will the playable character have accomplished when the game is “beaten” or “won”? Are players paying attention to the narrative as they play? The narrative element can be more or less integral to the overall play experience. For example, the narrative premise of *Super Mario Bros.* (Nintendo 1985) is Mario’s quest to rescue Princess Toadstool from her kidnapper, Bowser. However, aside from short, generic, and repetitive noninteractive scenes, nothing in the game makes direct reference to the princess’s kidnapping or gives the player a reason to consider it an important part of minute-to-minute gameplay. Players might engross themselves in the game without giving thought to the nature of the princess’s plight. Games can be engaging when narrative is cursory or even absent, but narrative can be an obvious site for values-rich content, motivation, and context.

Illustrative Game: *September 12th*

September 12th (Powerful Robot Games 2003) begins with a cryptic set of instructions that read, in part, as follows: “You can’t win and you can’t lose.... The rules are deadly simple. You can shoot. Or not. This is a simple model you can use to explore some aspects of the War on Terror.” The instructions also provide the means for identifying the game’s two categories of nonplayable characters: the men who are wearing keffiyeh (the traditional headdress of Arab men) and carrying guns are terrorists, and the people who are in robes and skullcaps or headscarves are civilians (figure 3.1).

The game world is a busy desert marketplace where terrorists are spotted here and there among civilians. The player controls a targeting reticule that can be positioned anywhere in the market, and left-clicking fires a missile at the reticule’s location. Inferring a narrative premise from this set-up is



Figure 3.1

A “deadly simple” narrative posits players as shooters, from *September 12th* (Powerful Robot Games 2003).

not as straightforward as it usually is in mainstream games. The playable character represents the American side in the war on terror, and someone familiar with the conventions of video games probably would assume that the playable character is supposed to use missiles to eliminate terrorists in the marketplace. However, when the player fires on the terrorists, the explosion is so large and the crowd so thick that both terrorists and civilians are killed. In the aftermath of the attack, people around the explosion begin mourning, and some become terrorists themselves. Firing a missile typically creates more terrorists than it kills.

What will the playable character accomplish when the game is “beaten”? The only sense in which the game can be beaten is if the player realizes the futility of the playable character’s one-dimensional approach to fighting terrorism. *September 12th* inverts the conventional approach to narrative in video games by encouraging the player to recognize that something is flawed in the assumptions underlying the playable character’s view of the world and something is tragic and self-defeating in his quest. This might spur players to critique the premises of the real-world war on terror.

2. Characters

Can playable characters be customized or selected? If they can, how is this done, and what options are provided? What are the characters' attributes and characteristics? What are the characteristics and roles of nonplayable characters? In some games, characters are predefined, but in others, the importance of character emerges outside of its purely narrative components. Think of Chrono from *Chrono Trigger* (Square 1995), Link from the *The Legend of Zelda* series (Nintendo et al. 1986) (figure 3.2), and Gordon Freeman from *Half-Life* (Valve 1998). These characters all are examples of a silent protagonist or tabula rasa, and all have garnered much acclaim in the gaming community because they play active roles in game narratives and seem to act as expressive vessels through which the player moves through the game. To the player, such characters define themselves more in terms of their player-controlled actions than in their dialogue or predetermined storylines.

SHODAN (Sentient Hyper-Optimized Data Access Network) is the antagonist in the *System Shock* (Irrational Games et al. 1999) series and drives the game narratives. She has earned a spot in gaming lore for her sinister demeanor and the way in which plot twists in *System Shock 2* are linked to realizations about her character. The Nameless One in *Planetscape: Torment* (Black Isle Studios 1999) provides a good example for a playable character that propels a game, because the narrative is concerned with having the



Figure 3.2

Link fighting, from *The Legend of Zelda: Twilight Princess* (Nintendo 1986).

character/player gradually discover who he or she is. Mario the plumber is not nearly as complex as these characters but is a perennial favorite as an everyman turned hero.

It is helpful to examine the kind of relationship that a game intends to establish between players and characters. For example, to what extent will the player feel complicit in the playable character's actions? Will the player relate to playable characters, be revolted by them, or react with some other emotional response?

Illustrative Games: *Portal* and *Layoff*

In the *Portal* (Valve 2007) first-person puzzle game series, there are two characters—GLaDOS (Genetic Lifeform and Disk Operating System) and Chell, the silent protagonist player character. The GLaDOS artificially intelligent system is responsible for maintenance and testing within the Aperture Science facility as Chell, a former test subject, tries to escape the center (figure 3.3). At first, GLaDOS is merely an instructional voice that monitors and directs players as they move forward in their “testing procedures.” Yet even early in the game, the instructions that she broadcasts across the facility start to take on sinister aspects. At one point, GLaDOS cautions, “Before we start, however, keep in mind that although fun and learning are the primary goals of all enrichment center activities, serious injuries may occur.” As players move forward, GLaDOS tries to intimidate the player into failure or trick the player into succeeding fewer times. To entice the player character forward, GLaDOS promises parties and a reward of cake for finishing the challenges, while warning the player character of her impending demise: “Cake and grief counseling will be available at the conclusion of the test.” By her own admission, however, GLaDOS is a liar. To add to player stress (and humor in the game), GLaDOS frequently taunts the player: “Please note that we have added a consequence for failure. Any contact with the chamber floor will result in an ‘unsatisfactory’ mark on your official testing record followed by death. Good luck!”

In the first *Portal*, GLaDOS eventually is exposed as a corrupted AI that employed neurotoxins to kill all of the prior scientists in the lab except Chell. At the end of *Portal*, Chell destroys some of GLaDOS's hardware, including one of her personality core spheres (her “morality core”). As Chell dismembers GLaDOS's hardware, a new portal is formed, and both Chell and pieces of GLaDOS are seen lying outside the Aperture Science facility. In the game sequel *Portal 2*, GLaDOS is back, accidentally activated by Chell and a positive artificial intelligence named Wheatley. Wheatley ends up being tempted by power and greed and betrays Chell.



Figure 3.3

Chell, from *Portal* (Valve 2007).

GLaDOS in *Portal* promises freedom, autonomy, and choice but is critical and cruel to the player character and is intent on her destruction. The player character Chell reacts against these restrictive values in what becomes a clever battle of good versus evil. Chell must rely on creativity and trust in her own abilities to acquire her freedom. When the player character Chell is compared to GLaDOS's manipulative and malicious behavior, Chell the player character seems honest, clear, genuine, and in the right.

The casual game *Layoff* (Tiltfactor Lab 2009) is designed to elicit empathy in players toward characters in the game (and toward the real-world people who are represented by those characters). Unlike *Hush* (Jamie Antonisse and Devon Johnson 2007), which we will discuss in detail in section 3, *Layoff* elicits a different kind of empathy. It is a matching game that resembles others in the genre such as *Bejeweled* (Popcap Games 2001). In *Bejeweled*, players swap adjacent gems on a playing board to create horizontal or vertical sets of three or more identical gems. When sets are created, their component gems disappear from the board and are replaced by new gems falling from the top.

In *Layoff*, players take on the role of “corporate management,” tasked with cutting jobs during a financial crisis (figure 3.4). Each icon in this matching game represents a worker. When the player matches sets of three or more workers, they fall off the bottom end of the board into an “unemployment office.” From management’s perspective, the workers are

interchangeable parts that can be swapped and terminated to save money. But the game is designed to challenge this perspective that a worker is only a cog in a machine. Each worker has a short biography that pops up when his or her icon is selected. For example:

Jaime, 39, is a client relationship manager at a small outsourcing company. This is a new job in Boston, and Jaime likes it very much except for the climate. Jaime works from home on Fridays to ease financial pressure or childcare, but the manager is possibly going to cut all employees down to a 4-day workweek.

In *Layoff*, a bond of empathy is created not only between the player and the playable character, representing management, but rather between the player and nonplayable characters, representing the workers being laid off. (By contrast, in *Hush*, discussed in section 3, players do seem to experience a sample of the same broad class of emotions experienced by the playable character). Even so, in *Layoff*, players probably do not feel exactly what workers actually feel when they lose their jobs. Instead, they might experience indignation at the callousness of the management toward the workers, or sorrow for the people who have lost their jobs in a bad economy.

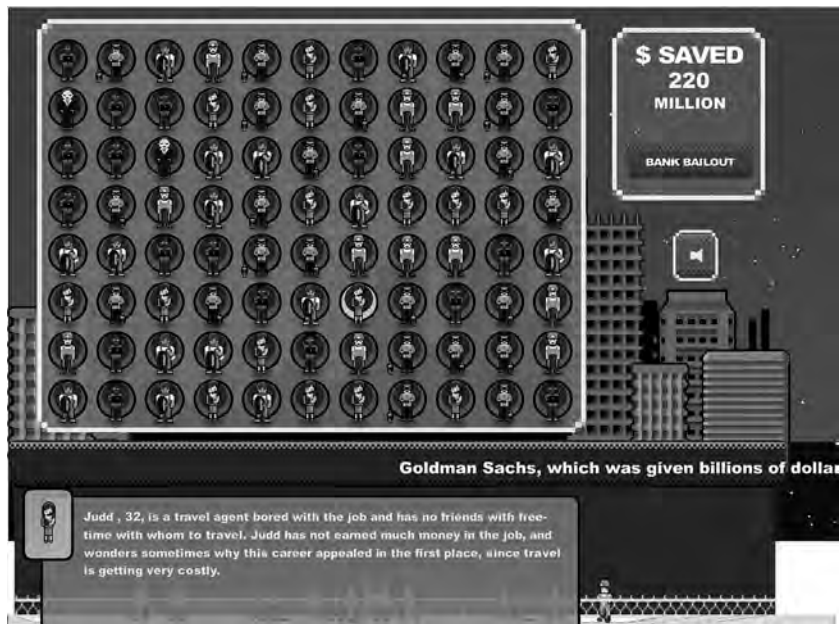


Figure 3.4

Individual characters in *Layoff* fostered empathy during an overwhelming financial crisis (Tiltfactor Lab 2009).

This is what psychologists call reactive empathy—an emotional reaction to another person’s situation that does not mirror that person’s own emotional state.

Layoff and *Portal* are excellent models of games that create meaningful bonds between players and characters to establish a personal connection with a larger issue or event.

3. Actions in Game

What can the player do (or cause playable characters to do) in a game? Most contemporary mainstream games enable a limited set of playable character actions. In games such as *Call of Duty* (Activision 2003), *Angry Birds* (Rovio 2009), and sports games, common actions emerge, including shooting, fighting, running, driving, and sports-related actions (such as batting or jumping). This does not mean that a game where the playable character primarily shoots a gun, for example, will necessarily be clichéd or derivative. *September 12th* is an excellent example of a game in which a conventional action takes on new meanings when placed in a new context. We have been excited by the tremendous expressive possibilities of games that are built around less conventional actions.

Illustrative Games: *Three Player Chess*, *Waking Mars*, and *Hush*

Traditional chess, in which two players compete for dominance of the board by capturing each other’s pieces, has conventionally been interpreted as an allegory for war. *Three Player Chess* (Catlow 2001) subverts the mechanics (and allegory) of traditional chess by introducing a third player whose goal is to create a state of peace between the other two players (figure 3.5).

Two players in *Three Player Chess* control either the black or white “power pieces” (kings, queens, knights, and rooks). The third player controls all pawns and uses the pawns to run interference between the other two players, preventing them from capturing each other’s pieces. If no pieces are captured for five turns, grass begins to grow on the board, covering the black and white checks. If no pieces are captured for twenty turns, the entire board becomes covered in grass, representing a victory for the pawns and, in the realm of this game, world peace.

The designer said that the game was inspired by the second Iraq war, when the peaceful protests of ordinary people (pawns) presented a counterpoint to the belligerence of power players in the George W. Bush administration. The designer asked a question: under what conditions could nonpower players (pawns) achieve victory over power players? An answer

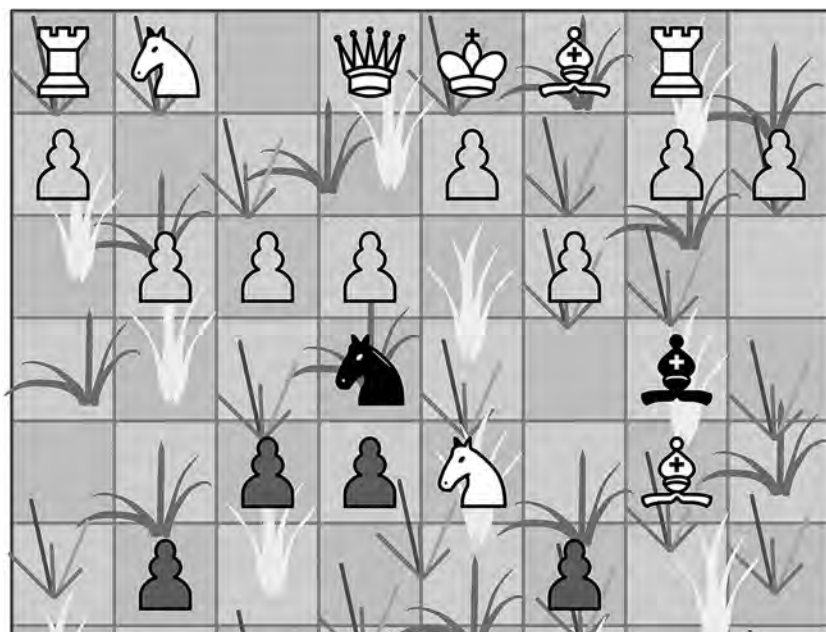


Figure 3.5

Chess game, from *Three Player Chess* (Catlow 2001).

to this question is suggested by player actions that offer a pacifist alternative to the martial allegory of traditional chess.

Three Player Chess subverts traditional chess by providing the pawns with a pacifist role. Values emerge from the twist on a traditional game. Game actions instigate values at any time, however, and do so even when they are there merely to support the game concept.

In *Waking Mars* (Tiger Style 2012), the year is 2097, four years after alien life forms were discovered in Mars caves. Players play the game as exploring scientist Liang and fly through the caves, cataloging and discovering the new life forms (figure 3.6). Players plant alien seeds, foster their growth by collecting resources and distributing them accordingly, and then move on to animal-like organisms. In some cases, players must bring life forms to life; in others, the forms must be managed. Players check their progress through a Biomass score, which increases by planting flora and overseeing the life cycle of fauna. Players create ecosystems of their own designs and strive to achieve high biomass and build balanced systems. To reach a balanced system, players must discover states of equilibrium or risk creating unbalanced and unproductive relationships between the organisms

**Figure 3.6**

Liang, from *Waking Mars*, working to revive the planet (Tiger Style 2012).

that will not generate enough biomass. The goal of the game is to discover the secrets of Mars's past by bringing the dormant plants to life, but this will work only if the ecosystem is robust. The notion of balance infuses the game: some plants grow in basic soils, others in acidic soils; some organisms are immobile, others are mobile; some organisms are constructive organisms and breed offspring, others are destructive. Patience is required in this relatively slow-paced game as players solve puzzles about which life forms are symbiotic with others. Instead of rewarding players for winning or conquering, the game rewards players for considering cause and effect and, over a longer time period than typically is designed into a casual game, it also credits players' attention to sustainability.

Hush (Jamie Antonisse and Devon Johnson 2007) uses a timing/matching mechanic to immerse the player in the role of the playable character, a Rwandan Tutsi mother hiding with her baby in a hut during the 1994 genocide (figure 3.7). Players play as a mother who sings a lullaby to pacify her baby as soldiers pass by outside the window. If the lullaby falters, the baby begins to cry, and the soldiers may discover the hiding place.

Hush's creators, Jamie Antonisse and Devon Johnson, were conscientious designers who found ways to express values through their game. The player "sings" the lullaby by typing it at the precise rhythm indicated by on-screen prompts. Players have reported that as they miss notes in the lullaby, the baby's cries grow louder, and the soldiers come nearer, they



Figure 3.7

The player actions generating incredible tension and empathy, from *Hush* (Jamie Antonisse and Devon Johnson 2007).

feel an escalating sense of tension and dread. The game won the 2008 Better Game contest, where judges said that they were amazed by the anxiety that the game causes. In demo after demo of this game, across audiences, players are moved. After watching the game being played, people approach the demonstrator or player to say that this was the first time they had had such an emotional reaction to a game. They consistently felt a strong sense of empathy for the mother. This is an example of what psychologists call parallel empathy, where one person feels emotions that are akin to those felt by another person.⁴ A game can provide players with only an extremely limited experience of a situation this dire, but *Hush* creates an empathetic bond between player and playable character.

4. Player Choice

Unlike most other media, games can provide players an opportunity for choice. Many games channel players down a relatively linear path from beginning to end, with determined events that must happen on each level.

Some games, however, provide choices that significantly influence the play experience, and in some cases the choices have a moral valence. For example, the *Mass Effect* (Bioware 2007) games allow players to approach situations as a compassionate, conciliatory, and altruistic “paragon” or as a ruthless, belligerent, and self-serving “renegade.” Choice of play style greatly affects interactions and relationships with nonplayable characters and also determines how the storyline unfolds.

From a values perspective, what does it mean to offer or withhold these kinds of choices? Games like *Mass Effect* equally incentivize “good” and “evil” choices, and they might be considered morally relativistic. It could be that players experience them as a kind of sandbox for moral play, allowing them to explore ethical issues in a setting where real-world consequences do not apply.

Illustrative Games: *Star Wars: Knights of the Old Republic*, *The McDonald’s Videogame*, and *Spent*

The *Star Wars: Knights of the Old Republic* (KOTOR) (Bioware 2003) role-playing games are similar to the *Mass Effect* games in that players choose to follow either the “light path” (in which the playable character’s behavior is motivated by compassion, mercy, and self-sacrifice) or the “dark path” (in which the playable character is driven by hatred and lust for power) (figure 3.8). Depending on path chosen for one of the three player character classes, the games’ stories progress differently, and the playable characters develop different powers.



Figure 3.8

In *Star Wars: Knights of the Old Republic* (KOTOR), players may choose a dark path or a light path (Bioware 2003).

The *KOTOR* games present intriguing moral choices, but players do not necessarily make their decisions using moral criteria. One player might act ruthlessly to acquire dark-side powers because doing so introduces entertaining mechanics. Another player might act virtuously to unlock the light-side powers. So the moral character of the game could depend significantly on how the player decides to engage with it,⁵ and players do likely question their identities and responsibilities in gameplay.

The McDonald's Videogame (Molleindustria 2006) offers a different approach to player choice. This is a business simulation like *Railroad Tycoon* (MicroProse 1990) or *The Movies* (Lionhead Studios 2005) in which the player micromanages various aspects of a commercial enterprise. The game description text on the *McDonald's* videogame website, written from the point of view of Ronald McDonald, admits that the business has had “glitches” in terms of deforestation, food poisoning, and so on and has negatively affected society and the environment. Unlike most casual games, *The McDonald's Videogame* is designed to convey an argument on the nature of capitalism. Starting in the year 2000, players work through successive years to raise revenue. Players need to supervise all areas of the fast-food chain, including agriculture, feedlots, restaurants, and boardrooms (figure 3.9). Because choices are limited, destroying strips of rainforest to farm for McDonald's (Molleindustria 2006).

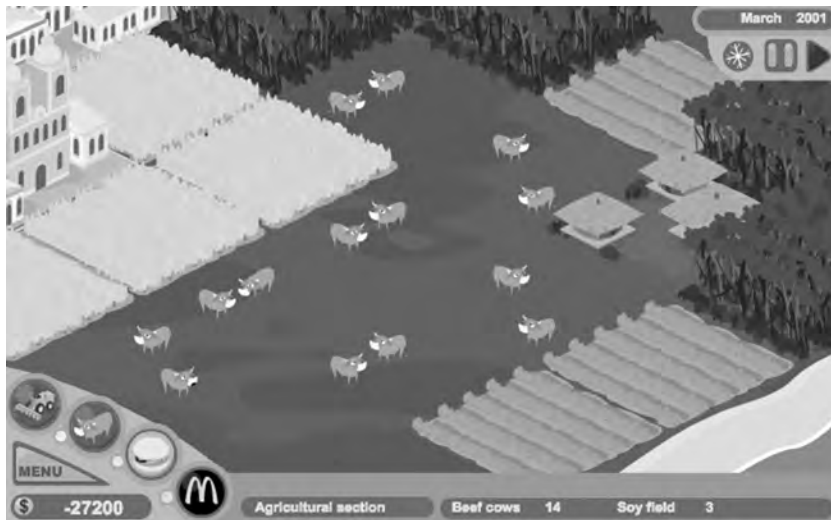


Figure 3.9

The player choices in *The McDonald's Videogame* reflect the nature of contemporary global business practices: the player must destroy South American rainforests to farm for McDonald's (Molleindustria 2006).

produce grazing land for cattle, for example, is inevitable. Restaurant traffic can be controlled by marketing campaigns. Ian Bogost analyzes the play experience:

The McDonald's Videogame mounts a procedural rhetoric about the necessity of corruption in the global fast food business, and the overwhelming temptation of greed, which leads to more corruption. In order to succeed in the long-term, the player must use growth hormones, he must coerce banana republics, and he must mount PR and lobbying campaigns. Furthermore, the temptation to destroy indigenous villages, launch bribery campaigns, recycle animal parts, and cover up health risks is tremendous, although the financial benefit from doing so is only marginal.⁶

The game creates an interesting tension between player choice (players can choose whether to engage in the most injurious business practices) and a general propensity toward running up the score. Players switch between a farm that supplies food to McDonald's (where deforestation must happen to keep up with growing land needs), a feed lot (where cows are fattened and players attempt to stop disease), a McDonald's restaurant (where inefficient workers should be fired—"eliminate the weak links"), and corporate headquarters (where the board of directors and the public relations office develops countermeasures against company detractors).

In most games, the choices that players make may be almost exclusively determined by what awards them higher scores (or whatever the game uses as markers of achievement or progress). Similarly, in the context of capitalist venture, player behaviors may be directed almost exclusively toward the goal of higher profits, and in some instances may find exploitation, bribery, and deceit almost irresistibly pragmatic behaviors. By immersing players in the decision-making processes of fast-food executives, the game offers a cogent critique of prevailing political and economic values.

Spent (McKinney 2011) also fosters thought-provoking tensions between player choices, but it does so by limiting possibility to unfavorable options (figure 3.10). The game offers players realistic but difficult decisions that people would face when living on \$1,000 per month in or around Durham, North Carolina. Made for the Urban Ministries of Durham, the game offers dilemmas that lead people to seek social or financial help. The goal is to end the month with some funds remaining, but interruptions such as accidents or health issues crop up and threaten to upend the player. Players learn how quickly shifts in jobs, apartments, and medical care can lead to homelessness and poverty.

"You'd never need help, right?" the game asks the player at the start. Players enter the game by clicking "Prove It: Accept the Challenge." Statistics

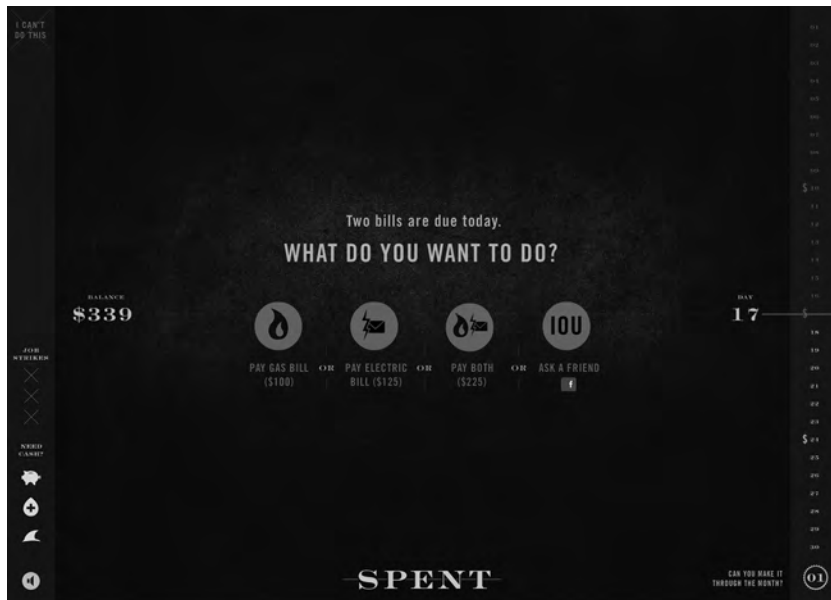


Figure 3.10

Spent demonstrates how close most Americans are to homelessness (McKinney 2011).

open the game to position the player's point of view: 14 million Americans are unemployed, and you are a single parent. Can you make it through the month? The options are "Find a Job" or "Exit." From there on, players choose from limited options, such as applying for a job as a restaurant server, warehouse worker, or temporary office worker. Temps have to take an in-game typing test. Restaurant servers have to purchase their uniforms. Most groceries are too costly for the monthly budget.

The game offers real-world feedback from data based on the Durham area. For example, the player can choose to live closer to work, where the rent is much higher, or live farther away, where transportation costs are higher. After players choose an option, the game displays a message acknowledging that "you and 12 million other American households" spend too much on housing.

5. Rules for Interaction with Other Players or Nonplayable Characters

Values are often conspicuously at play in the ways that games afford and regulate interactions with other players or nonplayable characters. Sometimes nonplayable characters offer hints or permit interesting interactions

for finding clues or trading. The single-player game series *Fable* (Microsoft 2004) has deeper-than-average development of nonplayable characters, but there are many good examples of meaningful interactions with nonplayable characters. In multiplayer games, customs and rules that are unique to the gaming community can govern interactions (the context of play is more fully detailed as an element later in this chapter). Some games create unwelcoming spaces for new players. In contrast, the massively multiplayer online role-playing game (MMORPG) *City of Heroes* (NCsoft 2004) encourages cooperative relationships between new and experienced players. The game uses a “sidekick system” that provides incentives to both higher- and lower-level characters to play as a team. This relatively straightforward set of rule changes can completely reframe relationships between experts and novices. By tinkering with the rules for interaction with other players or nonplayable characters, designers can put values like cooperation, generosity, and altruism into play or can adjust these rules to affirm more individualistic values like competition and self-sufficiency.

Illustrative Games: Rock, Paper, Scissors Tag and Journey

Celia Pearce, Tracy Fullerton, Janine Fron, and Jacqueline Ford Morie have described an event called New Games Day, where students, faculty, and staff at the University of Southern California revived some of the games created by the experimental New Games Movement of the 1970s.⁷ Working with traditional games, the team’s “new” New Games featured large-scale activities that incorporated physicality, trust, and cooperation. Their description of rock, paper, scissors tag provides an excellent example of how changing the rules for interactions between players can reconceptualize the competitive ethos that often is associated with sport and play (figure 3.11):

By far, the group favorite was a game called Rock-Paper-Scissors Tag. In this game, two teams face off across a line. On the count of three, each group shows rock, paper, or scissors, having huddled beforehand to decide on a strategy. The team that shows the losing sign turns and runs to their home base, about fifteen feet behind. The team that shows the winning sign gives chase. Any person tagged by the winning team transfers to that team for the next round of play. The key to the game lies in the fluidity of the teams. Although you may have started on Team 1, soon you will be on Team 2, then back to Team 1, and so on. The game goes on until there is only one team or until everyone is too exhausted to continue.⁸

Many traditional sports use a team-based competitive framework that categorizes other players as either enemy or ally, and that categorization is maintained from the beginning of the game until the end. This team building can create strong bonds among players and animosity toward



Figure 3.11

A version of rock, paper, scissors tag being played at Dartmouth College.

opponents.⁹ However, when players switch teams frequently, as in rock, paper, scissors tag, the distinction between allies and adversaries becomes too ephemeral to “stick” in the same way that it does in traditional competitive sports. In the words of Pearce and her colleagues, the alternative approach to competitive play “encourages a global allegiance to the play of the game itself rather than to the success of any particular team.”¹⁰

Journey (thatgamecompany 2012) is a PlayStation 3 game that positions the player as a lone robed figure wearing a scarf and wandering in a vast desert (figure 3.12). Players find themselves traveling on a quest to a distant mountain to discover the history of a once vibrant culture that occupied the land. In each level, the player may encounter one other player who might temporarily connect to their game. The players can see, meet, and help each other, but they can communicate only through musical patterns of singing, and they are paired anonymously. Players can help each other only by showing each other paths or helping change one another’s scarves.

The chime that creates the music transforms found cloth into magical red cloth, which allows the player to float for a time. If players finish a level together, they can stay together for the next. Players can be distinguished by their unique symbols that appear in the air as they sing or are marked on their robes. The design of the game fosters cooperation between players without requiring it and removes competition. Because a player can be helpful to the other player but cannot harm the player, player interaction

**Figure 3.12**

Journey's haunting spiritual quest (thatgamecompany 2012).

tends to be collaborative and profound. Designer Jenova Chen has noted that some playtesters cry after completing the game. At thatgamecompany's Web forum for the game, players discuss crying in depth. One player notes, "The one thing that really amazes me though, journey [sic] doesn't trigger my desire to win or to be better than someone. Something that happens in nearly every other game."¹¹

6. Rules for Interaction with the Environment

What types of interactions does the game afford between playable characters and the nonsentient aspects of the game world (i.e., those aspects of the game world that are not characters)? What resources are available? What types of interactions are incentivized through the game's rules and the capacity of the artificial intelligence system? Is the player rewarded for exploring or appreciating, for depleting resources or replenishing them, or for destroying the game world or nurturing it?

Illustrative Games: *StarCraft* and *Trash Tycoon*

StarCraft (1998), a game series created by Blizzard Entertainment after its successful *Warcraft* game (1994), is a real-time strategy game set in the twenty-fifth century, where three species fight for dominance—the insect-like Zerg, the Protoss (a humanoid species with psychic abilities), and

Terrans (humans exiled from Earth). In many strategy games like *StarCraft*, players continually harvest the game world's resources for raw materials to build military hardware, buildings, and so on, and they are given no mechanism through which to replenish those resources. It would be a stretch to say that games like *StarCraft* inculcate anti-environmentalist values, but such games do little to promote the value of sustainability.

The *FarmVille*-like Facebook game *Trash Tycoon* (Guerillapps 2011) provides an example of a game that is compatible with sustainability (figure 3.13). The game's core concept is "upcycling" or converting waste to new materials or products that are of higher quality and better for the environment. Players clean up a trash-strewn city, build facilities like paper recyclers and glass smelters, and sell the products to earn funds to build new facilities and upgrade existing ones. Along the way, they earn badges and rewards for reaching sustainability milestones. The Plastic Master bronze badge, for example, is earned by creating twenty items with recycled plastic.

On an abstract level, the rules of *Trash Tycoon* are nearly identical to those of many mainstream strategy games. The player harvests resources (in this case, trash) and processes them into products that facilitate progress



Figure 3.13

Upcycling in *Trash Tycoon* addresses the aftermath of trash (Guerillapps 2011).

toward in-game goals. This is not mechanically different from harvesting minerals in *StarCraft*, for example, to be processed into siege tanks. The narrative of *Trash Tycoon* reskins the conventional rule sets of strategy games to engender a very different set of values.¹² The issue of producing trash in the first place is not addressed, however, which calls into question the effectiveness of reskinning a commonly accepted and successful game model for a social-impact game when the root of the problem remains.

7. Point of View

As in other forms of media, point of view in games shapes how viewers and participants experience the world that is being presented. How do players view the playable character? Do they survey the game world from a first- or third-person perspective? Do players take on the view of a certain character, or are they controlling the situation from a God's-eye, top-down view? Is it something in between or both? Point of view may partially determine how players understand themselves in relation to other players, nonplayable characters, and the game world and may also influence how they conceive their own agency. For example, a game in which playable characters are controlled from a top-down perspective may suggest that players occupy the role of a "god" or "master." In contrast, a first-person perspective may encourage greater identification with playable characters. Even within one point of view (such as third-person), there are wide variations in interpretation. The vast majority of the *Uncharted* (Naughty Dog 2007) games, for example, are third person, but the camera is dynamic. Most of the games implement an over-the-shoulder camera (common in games like *Resident Evil 4* (Capcom 2005) and *Gears of War* (Epic Games 2006), but some platforming sections have the camera pull back so that the game effectively become a side-scroller. Other platforming sections in *Uncharted* have the camera lie in front of the playable character as he continually runs toward it while something chases him from behind, as in *Crash Bandicoot* (Naughty Dog 1996). Subtleties in point of view, such as camera position, make a difference. Even though all three of *Uncharted's* camera placements are third person in the broadest sense, they encourage different gameplay, a different relation to the playable character, and a different play experience.

Illustrative Games: *Tomb Raider* and *Mirror's Edge*

The *Tomb Raider* (Eidos 1996) games have used a conventional third-person perspective in which the camera hovers behind Lara Croft, the series' iconic playable character. Although the camera often zooms out to accommodate

segments of gameplay that require a wider view, it usually returns to just behind Lara, offering what many critics have argued is a voyeuristically satisfying view of her body (figure 3.14).

The critic Mike Ward notes the significance of seeing Lara from the back during gameplay: the voyeur's pleasure depends on being able to look without being seen.¹³ None of this means that the third-person perspective is necessarily sexualizing or objectifying. But with the context provided by Lara's clothing (typically tight shorts and a tank top) and her proportions (large hips and breasts on an otherwise slender frame), the effect is unambiguously sexual.

Compare this to how point of view is used in *Mirror's Edge* (EA Digital Illusions CE 2008), another action-adventure game with a female playable character. Players see the action from a first-person perspective through the eyes of its playable character, a courier named Faith who works with anti-authoritarian rebels in a totalitarian society (figure 3.15). When she runs, the distance moves quickly forward. When she jumps, the player's view of the world rises and then falls. We do not see much of Faith's body in gameplay. Instead, the focus is more on her actions, which are represented through shifts in her field of vision as she moves. Whereas the *Tomb Raider* games present a strong female character who seems at least partly designed



Figure 3.14

Camera controls highlighting third-person perspective in games such as *Tomb Raider* can offer a voyeur's pleasure (Eidos 1996).



Figure 3.15

Faith, from *Mirror's Edge* (EA Digital Illusions CE 2008).

for male pleasure, *Mirror's Edge* offers a female action hero who is, semantically speaking, less paradoxical.

8. Hardware

Game hardware shapes how designers think about games. The hardware—the core capacity of system memory, the speed of graphics processors, and the physical device of the mouse, controller, or keyboard—frames the possibilities of designers' imaginations.¹⁴ With each advance in hardware, new types of games are possible. This has been true throughout the history of electronic and digital games. The very early game *Tennis for Two* (Higinbotham 1958) used an oscilloscope as a visual monitor. In 1998, Nintendo bundled a “biosensor” with *Tetris 64* (Amtex 1998), and in 2010, it offered a “vitality sensor” that monitors a player's pulse. In the 2002 game *Rez* (Sega 2001), designed by Tetsuya Mizuguchi, players fly three-dimensionally (using a “rail shooter” convention in 3D space) into a seemingly endless tunnel filled with sound, light, and enemies. Always flying forward, players fire at enemies, gain points, and create electronic music with the sounds they are creating. The game was intended to be played with an additional piece of hardware called “the trance vibrator.” This hardware was designed to be worn on the body to draw even more senses into the action and create a synesthetic experience.

Illustrative Game: *Dance Central 2*

Dance Central 2 (Harmonix 2011) embodies some interesting features that are made possible by the Xbox Kinect hardware, which offers a camera and infrared interface to allow hands-free, accurate control of items on screen. Whereas older dance games used pads to detect foot movements, Kinect hardware allows *Dance Central 2* to respond to a player's entire body (figure 3.16). The game can track one body or several, monitor bodies in motion in a 3D area, offer simultaneous two-player battles, and provide the ability to monitor and reward dancing to challenging choreography.

The accuracy of the body detection allows players to focus on more creative aspects of dancing, such as style, precision, and timing. The game thus encourages actual dancing rather than dancing “for the game” or making moves solely to get the controller to respond. Additionally, the game's use of its camera data to provide fun, fast-paced replays of the dancers highlights the individual dancing rather than only the game's characters. This accuracy shapes the values of the game by allowing players to express creativity and individuality.

9. Interface

Interface refers to attributes of the software and hardware that mediate players' interactions with the game. Interfaces are constructs of hardware (such



Figure 3.16

Kinect hardware enables a new breed of dancing game in *Dance Central 2* (Harmonix 2011).

as in the Kinect) and software, which are the modes through which players interact with the game world. Both physical and on-screen elements shape the player experience. Although these are often assumed to be value-neutral, they may shape the play experience in value-rich ways. For example, a hardware interface that allows physically disabled people to play might be said to affirm the values of inclusiveness and accessibility. A software interface that allows for easy communication between players might affirm the value of cooperation by facilitating collaborative tactical play.

Illustrative Game: *Leela* and [giant]oystick

Often, video games feature fast movements and frenetic decision making. Deepak Chopra's *Leela* (THQ 2011a) is the opposite type of game. Using an Xbox Kinect (or Nintendo Wii, although the Wii version is not as full-featured), players learn seven meditations and movements that help focus the mind on parts of the body where the seven chakras lie (figure 3.17). The idea that games might offer a spiritual or religious connection is very old, originating in the origins of games six to eight thousand years ago. A digital interface to religion and spirituality, however, seems rather new. In the "Play" section of the *Leela* gaming experience, players play games that target one of their chakras and use subtle movements to stimulate the chakras.

The navel chakra, for example, is supposedly stimulated as players aim and gather virtual fireballs (the navel chakra's element) to blast floating ore.



Figure 3.17

The interface of *Leela* involves the body as well as the mind (THQ 2011).

The chakras can be stimulated in sequences, or the player can work on his or her personal mandala. The look of the game—particularly in the “Mandala” section—is psychedelic, with trancelike interactive compositions that feature repeating patterns, manipulable fractals, and shifting colors. In the “Reflect” area of *Leela*, players use the game as a platform for guided meditation or as an accompaniment to silent meditation. The Kinect actually measures a player’s breathing, for example, and the game displays a representation of the player’s breath to offer feedback. Chopra is interested in healing and the intersection of science, consciousness, and spirituality and has created a successful game that mirrors in a compelling way some internal processes for which other interfaces would be inadequate.

The coauthor of this book, Mary Flanagan, has created an interactive sculpture called [*giantJoystick*] (2006) that embodies the value of cooperation by modifying the user interface of classic Atari 2600 games like *Asteroids* and *Breakout*. The original incarnations of these games are deeply engaging but can become an isolating pursuit: they shift players’ attention toward the action onscreen and away from friends in the physical environment. To change the value of individuality to the value of cooperation and particularly to foster cooperation among strangers, Flanagan changed a specific element of the design—in this case, the scale of the user interface. By making the joystick enormous—it is over 10 feet tall and requires steps



Figure 3.18

The interactive, ten-foot sculpture [*giantJoystick*] makes the familiar unfamiliar with a significant shift in interface scale (Mary Flanagan 2006).

to mount the sculpture—the play experience is transformed (figure 3.18). First, players report transitioning to a childlike state of feeling small again by the sheer scale of the play object: *[giantJoystick]* brings a feeling of wonder to players. Second, scale fosters a childlike fascination with the work but also determines how people interact in play. Visitors cannot easily play games by themselves with *[giantJoystick]*. One person (or sometimes more than one) moves the stick, while another presses the fire button by jumping on it. Through its shift in scale, the work highlights the spatial and social role of the interface. *[giantJoystick]* itself becomes the game and the site for interpersonal communication. With the new interface, classic games become a joyous celebration of collaborative fun. *[giantJoystick]* redefines technological conventions by recognizing the physicality and arbitrary nature of interfaces themselves. Flanagan's controller connects real people in real space, a phenomenon that is quickly becoming an emerging domain for digital games as new hardware and interface technologies involve the body and evolve the nature of digital gameplay.

10. Game Engine and Software

How does a particular software constraint or game engine affect what goes into a game? The affordances of the engine or codebase allow a game to appear and act as it does. Game engines—software frameworks that are used to create games—are often touted for their new features, such as the novelty of the physics engine (rendering, textures, environment, particle systems, lighting, and frame rate), networking ability (multiplayer, chat), and customizability (using tools such as editors). Constraints that are built into the software or the game engine can shape the content and values in a game. In the domain of first-person shooters, the game engines created for *Wolfenstein 3D* (id Software 1992) and *Doom* (id Software 1993) set the stage for many conventions that are still in use in 3D gameplay. The engines highly constrained physical interactions, for example: players typically run, jump, duck, and shoot, but they might not reach out with virtual hands to touch something. Players cannot pet a dog, for example, or reach with someone else to carry something. These constraints shape design decisions.

Ragdoll physics, for example, is one example where “what could be done” became a default technique in many 3D games. With ragdoll physics, the animation is computationally generated, allowing the game to avoid “canned” or predrawn sequences. Ragdoll physics has been used primarily in death scenes, which become more “realistic” because bodies fall in unique ways. Other game conventions also have emerged simply because

of the limitations of the game engine. For example, game characters “pick up” objects mostly by running over or shooting at them, simply because the engine could not handle more complex actions.

Popular game engines make certain types of actions and behaviors, such as collision and particle detection, easier and more spectacular. Physics engines make the calculation of trajectories easy for activities such as throwing, jumping, or shooting. The ease with which such actions are expressed can sway the designer in certain directions and away from actions more in keeping with other values that a designer might be attempting to express, such as family, community, peace, and sharing. Game engines are often made for first-person shooters. They do not perform as well when serving as venues for other types of content, such as the use of text, slow-moving narratives, deep introspective character dialogue, and believable live-action video.

Illustrative Game: *Quake*

The *Quake* (id Software 1996) engine strongly influenced game design for a decade. It was the first 3D real-time rendering game engine and the first popular networked first-person shooter (figure 3.19).¹⁵ The *Quake* engine worked well due to the way in which the preprocessor reduced the number of shape “faces” by not processing areas of the game level or map that were not visible to the player’s point of view. In this way, the environment could be drawn quickly on what now would be considered very slow processors. This technology allowed the presentation of 3D graphics on fairly limited machines.

In *Quake*, the playable character is an unknown protagonist who, in single-player mode, is attacked by monsters, zombies, and other misfortunes during a quest to collect runes and defeat an end boss (the final enemy at the game’s conclusion). *Quake* contributed to the process in which game norms from existing two-dimensional games were shifted into 3D spaces, such as “collecting” health in the environment and defeating end bosses. In multiplayer mode, players connect through a server and play either together as one cooperative team or against each other in modes such as death matches. Various player actions—such as collecting grenades, shotgun ammo, and nails for the nailgun—were standardized by the 3D game engine techniques and the institutionalization of prior gameplay shortcuts.

11. Context of Play

The cultures that develop around games affect the playing experience. Such cultures can be found in game worlds such as MMORPGs, in online boards

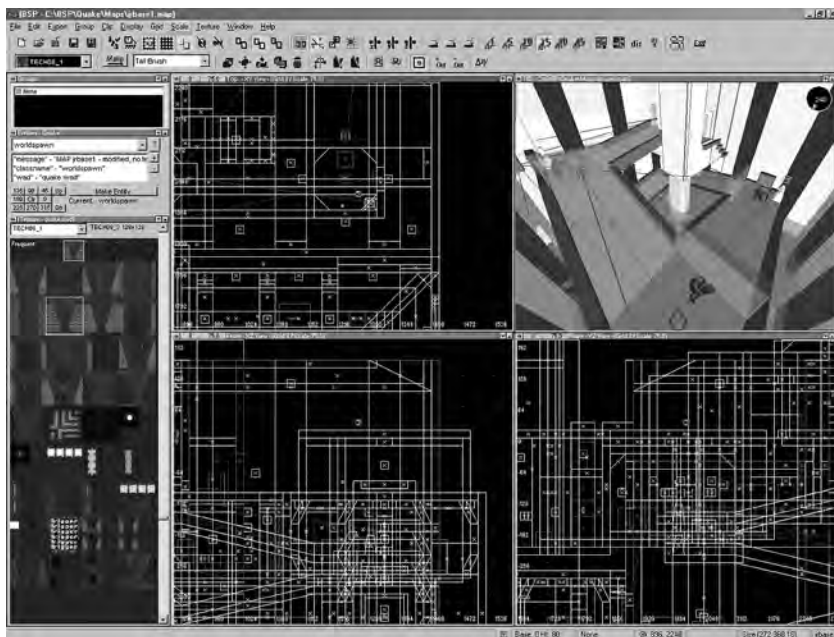


Figure 3.19

The design of the *Quake* engine focused on quick-to-load graphics techniques and a first-person perspective (id Software 1996).

and player communities, and in the physical environments in which games are played. Many online multiplayer games provide a relatively hostile environment for new players (“noobs”), who are routinely taunted, exploited, and attacked by more experienced players. In the opposite vein, *Lord of the Rings Online* (Turbine, Inc. 2007) celebrates exchanges and generosity. Game chat occurs in real time and is almost exclusively via voice rather than text. The game features kinships and other social formations to keep the bonds between players tight. At any time, players can give to other players, and the goods involved are created from activities that end up being quite elaborate. For example, a player can craft cupcakes by finding ingredients and an oven; these can be exchanged for beer or given freely out of generosity. The game re-creates the atmosphere and values of J. R. R. Tolkien’s worlds and characters.

Illustrative Game: *Defense of the Ancients 2*

Valve’s *Defense of the Ancients* (2003) is a series of real-time session-based online multiplayer strategy games in which ten players are divided into two

equal teams with the goal of destroying the opposing team's Ancient Structure in their associated stronghold (figure 3.20). Team play and communication are the foundations of the game. Like some online games, it is very “noob unfriendly,” meaning that experienced players often treat new players poorly. The hostility of the players who engaged in the first game of the series was well known, and the second game in the series introduced a voice chat feature that furthered hostility. Many players have complained about the unwelcoming, aggressive, and harassing commentary (such behavior directed specifically at female players has been well documented).¹⁶ Voice chat in most cases makes players' gender identity more obvious, which leaves players vulnerable to targeted abuse. Harassment is an ongoing issue within and outside of games. Although there are no reliable statistics on in-game harassment, anecdotal evidence suggests that it is a large problem. In-game harassment also reflects a larger cultural problem: a 2009 study shows that half of U.S. adolescent girls experience sexual harassment (it is often glossed over as “bullying”).¹⁷ Blog posts about *Defense of the Ancients* (and other games) are filled with hate speech, and the game's culture is biased against women and players of color. Some people who might otherwise play the game won't do so because of the context of play.¹⁸

Such problems are not limited to *Defense of the Ancients*. A bullying, unforgiving game culture often challenges new players or those from



Figure 3.20

The context of play for *Defense of the Ancients* is hostile to new players (Valve 2003).

underrepresented groups to “get over it” or get out of the game. A *Battlefield 3* (EA Digital Illusions CE 2011) game launch party in Texas, for example, “disallowed” women from the event to protect them from insults from male players. A statement from organizers is revealing:¹⁹

Nothing ruins a good LAN party like uncomfortable guests or lots of tension, both of which can result from mixing immature, misogynistic male gamers with female counterparts. Though we’ve done our best to avoid these situations in years past, we’ve certainly had our share of problems. As a result, we no longer allow women to attend this event.²⁰

That the organizers banned women but welcomed “misogynistic male gamers” says much about the values in this context of play.

12. Rewards

What are points awarded for? What are the game goals? If no points are given, how are players rewarded as they advance in the game? What is the end state of the game? How do you win? The game’s reward structure reveals what kinds of accomplishments are valued in the game, and therefore it can be an especially interesting element for values-conscious designers to consider. Aspects of reward systems can include side quests as opposed to mandatory quests, unlockable content, and the requirements for achieving a particular narrative resolution. In *Super Mario Bros.*, for example, the player accumulates a score throughout the game, but many players are motivated by other goals and might regard the score as secondary.

Illustrative Games: *Harpooned* and *SpellTower*

Some activist games expose the values that are laden in common game reward systems by providing ironic rewards. In a game touting itself as pro-social, players might take on the role of a polluting company, for example, and higher scores represent damage caused to the environment. In these cases, higher scores are ironically awarded for behaviors that the game actually opposes. One game with an ironic scoring system is *Harpooned* (Conor O’Kane 2008) (figure 3.21). The game plays in ways that are almost identical to the vertically scrolling “shoot ‘em up” arcade games of the early 1980s, like *Galaga* (Namco 1981) and *1942* (Capcom 1984), but the scoring system gives an activist twist to this familiar genre. Players control a Japanese research vessel in Antarctica and are instructed to “perform research on the whales by shooting them with your explosive harpoons.” After killing a whale, a player can maneuver the boat toward the whale’s remains to collect its meat for “later study.” At the end of each level, the meat is offloaded

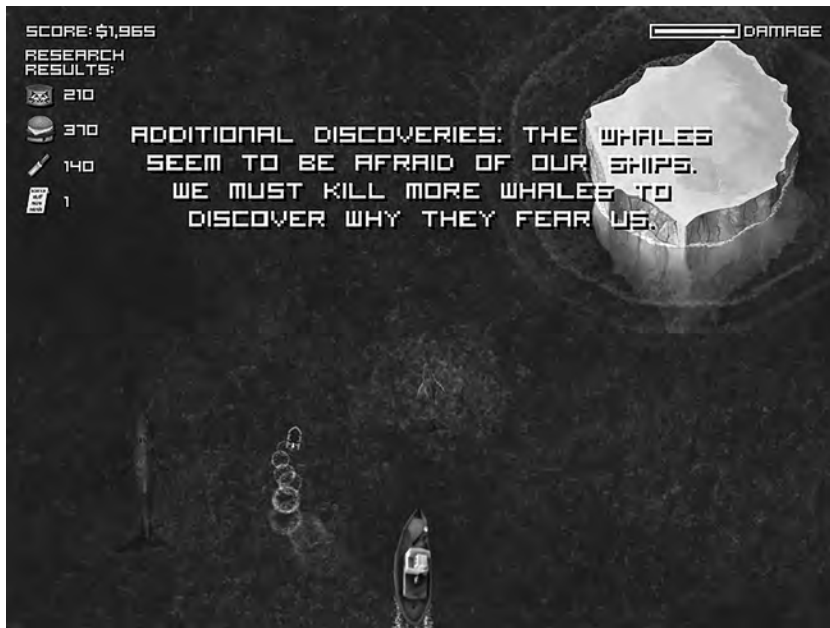


Figure 3.21

Harpooned (Conor O’Kane 2008).

to a “research vessel” where players receive a score that is intended as a sarcastic recognition of their performance. For example, a typical end-of-level score summary tells the player, “Our research has produced 320 cans of pet food, 200 whale burgers, 120 cosmetic products, and 1 scientific paper.” Once the scoring system is understood, the game’s message becomes clear: the mass slaughter of whales for “research” by Japan is a cover for commercial whaling.

SpellTower (Zach Gage 2011) has a different approach to rewards because the game is not necessarily taking on a social issue (figure 3.22). This seemingly simple casual spelling game incorporates a *Boggle*-style letter mix combined with a *Tetris* stacking game mechanic to allow players to spell words under constraints. The letters are mixed on the screen, and depending on the mode of the game, time-based or turn-based pressure adds to the difficulty. Points are assigned based on the length of the word, and players compete against their own high score.

Rewards in *SpellTower* are carefully designed and deceptively simple. The sounds that are created while combining longer and longer words evolve to develop into a magical indicator of mastery, rewarding the player with



Figure 3.22

SpellTower's sounds and smart glow effects set up a pleasurable encounter with spelling (Zach Gage 2012).

rare sounds for increasing word lengths. Along with the sound design, as the individual letters are constructed into words, they glow and pulse in anticipation of word completion. These small feedback elements make the entering of a high-scoring word extremely rewarding; a completed word explodes from the board, and the letters adjust to the new board state. The highest-scored word is recorded for the player, so players can continually try to best their top word. Often the best words need to be created by working backward and diagonally, and thus the game is set up to reward creative thinking. The final reward—seeing one's best word and the points associated with it—motivates the player for the next round.

13. Strategies

What strategies can be usefully applied in the game? What approaches to the challenges presented in the game will help players progress or win? This element is similar to scoring: strategies can straightforwardly convey values by motivating players to use particular play styles, or they can reward particular play styles for the purpose of ironic critique.

Illustrative Game: *PeaceMaker*

In *PeaceMaker* (ImpactGames 2007), the player inhabits the role of either the Israeli prime minister or the Palestinian president during a particularly volatile period of the Israeli-Palestinian conflict (figure 3.23). Whichever role the player chooses, the goal is to create conditions in which a two-state solution to the conflict becomes viable. There are a wide variety of actions to choose from—some hawkish, some conciliatory, some unilateral, and some that require cooperation with groups on the other side of the conflict.

The game's values can most clearly be discerned by contrasting the types of strategies that lead to success with those that lead to failure. Generally, a hawkish foreign policy will exacerbate the conflict, and small conciliatory gestures will build trust between the two sides. Small gestures set the stage for more significant peace-building policies that can eventually lead to the end of the conflict. The game affirms the value of diplomacy and a nonmilitaristic foreign policy. The player can accept or reject the model's assumptions but is encouraged to consider their applicability to the real-world conflict.

14. Game Maps

Game maps (also called levels or environments) are the custom scenarios—the stages, settings, and mission details—of a game. In most cases, these

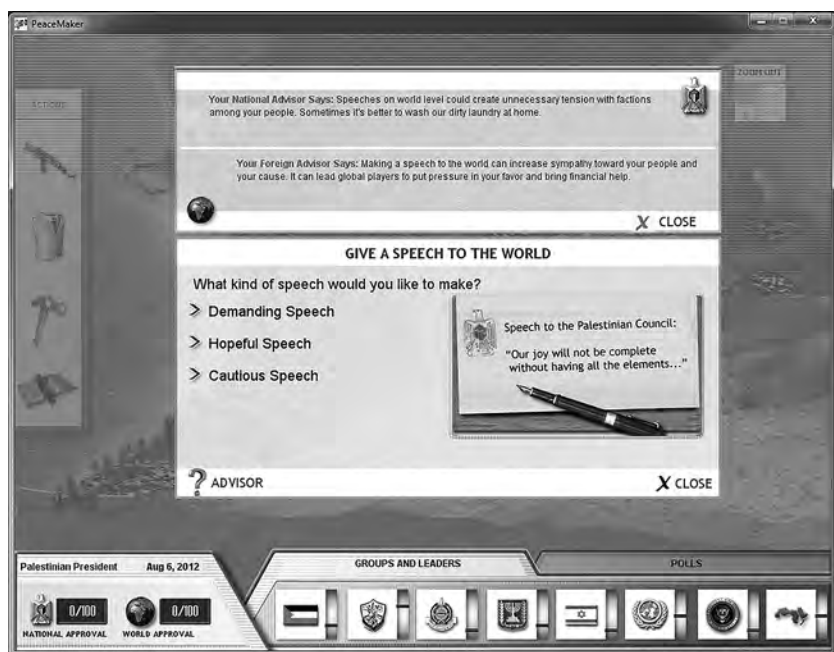


Figure 3.23

Hawk or dove strategies in *PeaceMaker* result in extremely different outcomes and reflect the challenges of a real-world conflict (ImpactGames 2007).

are designed in a grid-based or cubic space. Any spatial arrangement in a game can prioritize particular values. Collaboration, for example, cannot easily happen in confined spaces where teams cannot congregate on screen because players often wish to see the interactions of their friends while fighting together. As another example, generosity might require players to be able to approach or at least recognize other players in the game space or to receive a message from the other players. Thus, both the spatial metaphors alluded to in the design of the game map as well as the actual constraints of the map can foster or prohibit certain values.

Illustrative game: *Left 4 Dead 2*

Left 4 Dead 2 (Valve 2009), the second in a series of zombie games by Valve, is a cooperative first-person shooter set in a postpandemic New Orleans (figure 3.24). The story revolves around four people who are immune to a virulent global disease and who must find other survivors and reach safe havens. Those who are infected become zombies and attack the uninfected.



Figure 3.24

In *Left 4 Dead 2*, the game map is reminiscent of post-Hurricane Katrina New Orleans (Valve 2009).

The gameplay begins in Savannah, Georgia, and the goal is to reach New Orleans, which is called “The Parish” in the game, a ruined city looking very much as it did in the aftermath of Hurricane Katrina. The game maps shape player experiences with claustrophobic alleys and plenty of confined spaces that provide opportunities for zombie attacks. The fictional Civil Emergency and Defense Agency (CEDA) and the military create safe zones to evacuate as many survivors as possible. Some of the CEDA workers who are wearing hazardous materials (hazmat) suits, however, are already zombies ready to attack.

In the game, the movement of survivors is paramount. In the creation of a virtual New Orleans, the maps needed to use nonlinear spaces to prolong the gameplay, create ambiance, and mirror the variety of spaces found in an older city. Level designer Dario Casali noted that the maps themselves were set by plotting a course that the players (as survivors) would likely travel. For example, the city park that is featured in campaign five is located at the center of the city. With its open spaces bordered by round hedges, this park becomes an ideal place for the designers to situate a “generator,” a type of zombie with particular traits (others include “spitter,” “charger,” and “hunter”). Next in the player’s journey is likely the cemetery, a big open space that has crypts, which allows for ambushing and other actions.²¹ These

open spaces are dangerous and quickly become filled with attackers who create mob scenes that some critics say mirror depictions of New Orleans in crisis after Hurricane Katrina. The game's "director"—the technical artificial intelligence that controls game difficulty—changes the layout of the map as players move through the space. In the cemetery, for example, the layout of crypts is rendered dynamically based on how well a player is doing. The patterns are dynamically generated through game play.²²

Chet Faliszek, the writer on the project, described the game spaces as the "Deep South," featuring swamps and back roads as well as New Orleans.²³ The space of New Orleans is, to some players and critics, too much for a game to contain after a catastrophe. "Setting the game in a city that was [the] scene of dead, bloated bodies floating by so soon afterward was a bad call," Willie Jefferson of the *Houston Chronicle* wrote in his "Gamehacks" blog. "New Orleans ... or the Old South can be very, very touchy areas to deal with."²⁴ Faliszek comments on the game's depiction of New Orleans: "It's a place we love, it's dear to our hearts. We would not cheapen it. It's not a brick-for-brick representation of New Orleans; it's a fictional version, and I love that city."²⁵ Yet the spaces that are depicted in the game reveal values that are embedded in level design itself.

On the surface, game maps might appear to have little to do with politics and values. The levels in *Left 4 Dead 2* are computationally generated to adjust to player skill. What can be the politics in those mere creations of location? As we know, Faliszek admits to intentionally evoking the post-Hurricane Katrina setting of New Orleans. But because some game maps are rendered to model this time and place, the game invokes issues in U.S. social history. By creating the rules to render the game map, the designers bring along dimensions of troubled race and socioeconomic disparity that followed in the wake of the disaster. Katrina is not a mere backstory: the game brings with it the tension, the accusations, and representations of those who were most affected. The game is rendering the city dynamically and refers to New Orleans post-Katrina, so race and socioeconomic status seem to be algorithmically embedded in the depiction of the city—a claustrophobic game map filled with desperate zombies.²⁶

15. Aesthetics

Although beauty is in the eye of the beholder, the aesthetics of a game express values. All games feature some type of visual look, sonic treatment, or physical movement that links them to the historic concept of aesthetics. Games operate far beyond the functional level: central to any game is

its connection to emotion and feeling. Aesthetics impart strong reasons to like or not like a game. They give players the sense of meaning outside and along with the game actions, narrative, and reward. For many players, for example, the *Uncharted* (Naughty Dog 2007) series stands out because it is beautiful and “cinematic.” *Uncharted 2* (Naughty Dog 2009) earned much praise for the set pieces in which battle took place, the high degree of visual and aural polish, and its Indiana Jones–style plot. These games differentiate themselves from other action-adventure games in their high production values and cohesive look and feel—in other words, for their aesthetics.

All games have some sort of aesthetic, and many games are beautiful, but the aesthetic moves beyond what is good looking or not and ultimately infuses the game with values. *Journey*, for example, infuses values in several ways. The value of cooperation is integrated through its stunning sound design as the players communicate: the game’s beautiful sonic aesthetic emerges from the value of cooperation. The value of curiosity is rewarded by the gorgeous scenes along the quest to the mountain. A game’s aesthetics are a primary site of player pleasure and also launch values into play.

Illustrative Game: *Limbo*

The platform game *Limbo* (Microsoft 2010) sets the player in the role of an unnamed boy whose sister has vanished (figure 3.25). The boy can run,



Figure 3.25

The beauty of *Limbo* initially masks some of the cruelty in the game (Playdead 2010).

jump, climb, push, and pull. The game has a strong black-and-white art style, which is especially interesting because the character can momentarily become “lost” in the background and foreground of the world, which consists entirely of shadow shapes. The audio environment is minimal and haunting. Dangerous creatures such as giant spiders emerge from the shadows in a surprising, beautiful, and (for many) horrifying way. The beautiful monochromatic game world has reminded critics of film noir or German expressionist films. The beauty of the game works in contrast to the dark theme and the style of play style that is encouraged. Gruesome animation (dismemberment, beheading) materializes effortlessly and surprisingly from this seemingly simple and otherwise aesthetically stunning world, disrupting feelings of beauty and sympathy with horror. The values of beauty and cruelty emerge together through the play of *Limbo*.

Conclusion

In this chapter, we have examined fifteen categories of game elements—an ontological breakdown of what “makes up” a game. But a couple of warnings are in order. First, meaning emerges not from individual elements but *from the relationships among elements*. This point has been an implicit theme in preceding sections. Recall how point of view and character representation in the *Tomb Raider* games interrelate to cast Lara Croft as an object of voyeuristic pleasure or how *Three Player Chess* introduces supplementary actions and rules to subvert the values of ordinary chess. We see these relationships among elements playing a role that is similar to the syntax of a language, which, along with other systems, enables us to understand how words combine to convey meaning through sentences. Similarly, if we understand the syntax of games, we know how elements combine to convey meaning through play. Second, these elements in any game could plausibly take on a variety of different and even opposing meanings depending on who plays. Values-conscious design and analysis must therefore give full weight to contextual factors, including the variability in players’ values, beliefs, and backgrounds.

Groundwork for Values at Play

In these first three chapters, we lay the groundwork for Values at Play. In chapter 1, we establish a theory of values in digital games. In chapter 2, we survey some of the many ways that values can crop up, intentionally or

unintentionally, in games. Here in chapter 3, we describe fifteen elements, the raw materials from which the world of a game is built. In the next section of the book, chapters 4 through 7, we take a practical turn. Guided by our theory of values and with the fifteen game elements as our building blocks, we describe the three key components of the Values at Play heuristic—discovery, implementation, and verification—to offer guidance to conscientious designers as they create new games.

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