# Chapter 8. Game Worlds

Games entertain through gameplay, but many also entertain by taking the player away to an imaginary place—a *game world*. (This book uses the terms *world*, *setting*, and *game setting* interchangeably with *game world*.) The gameplay in most single-player video games appears to the player as interactions between himself and the game world. This chapter defines a game world and introduces the various dimensions that describe a game world: the physical, temporal, environmental, emotional, and ethical dimensions, as well as a quality called *realism*.

### What Is a Game World?

A game world is an artificial universe, an imaginary place in which the events of the game occur. When the player enters the magic circle and pretends to be somewhere else, the game world is the place she pretends to be.

Not all games have a game world. A real-world sport like football takes place in a real location, not an imaginary one. Playing football still requires pretending because the players assign an artificial importance to otherwise trivial actions, but the pretending doesn't create a game world. Many abstract games, such as tic-tac-toe, have a board but not a world—there is no imaginary element in playing the game. *Stratego* has a more elaborate world: The board is printed to look like a landscape, and the pieces are illustrated with little pictures, encouraging us to pretend that they are colonels, sergeants, and scouts in an army. *Stratego* could be played entirely abstractly, using only numbers and a bare grid for a board, but the setting makes it more interesting. Except for a few abstract games like *Vib Ribbon,* video games normally have rich game worlds realized through art, animation, music, and sound effects.

Most video games present their game world with pictures and sound: art, animation, music, and audio effects. Not all game worlds have a visible or audible component, however. In interactive fiction, the player creates the images and sounds of the world in his imagination when he reads the text on the screen. Designing such a world is a matter of using your literary skills to describe it in words.

Game worlds are much more than the sum of the pictures and sounds that portray them. A game world can have a culture, a style, a set of moral values, and other qualities that you'll look at in this chapter. The game world also has a relationship to reality, whether it is highly abstract, with little connection to the world of everyday things, or highly representational, attempting to be as similar to the real world as possible.

### The Purposes of a Game World

Games entertain by several means: gameplay, novelty, social interaction (if it is a multiplayer game), and so on. In a game such as chess, almost all the entertainment value is in the gameplay; few people think of chess as a game about medieval warfare. In atmospheric games such as the *Silent Hill* series, the world is essential to the fantasy. Without the world, the game would not exist, and if it had a different world, it would be a different game. One of the purposes of a game world is simply to entertain in its own right: to offer the player a place to explore and an environment to interact with.

As a general rule, the more that a player concentrates on a game's core mechanics, the less the game world matters to her. Mastering the mechanics requires a kind of abstract thought, and fantasy can be a distraction. Serious chess players don't think of the pieces as representing actual kings and queens and knights. When players become highly skilled at a game such as *Team Fortress 2*, they no longer think about where they are or why they're there; they think only about hiding, moving, shooting, ambushing, obtaining ammunition, and so on. However, this kind of abstract play, ignoring a game's world, usually occurs only among the most experienced and analytical of players. To someone who's playing a game for the first time, the world is vital to creating and sustaining her interest.

The other purpose of a game's world is to sell the game in the first place. It's not the game's mechanics that make a customer pick up a box in a store, but the fantasy it offers: who she'll be, where she'll be, and what she'll be doing there if she plays that game.

### The Dimensions of a Game World

Many different properties define a game's world. Some, such as the size of the world, are quantitative and can be given numerical values. Others, such as the world's mood, are qualitative and can only be described with words. Certain properties are related to one another, and these groups of related properties are the *dimensions* of the game world. To fully define your world and its setting, you need to consider each of these dimensions and answer certain questions about them.

### The Physical Dimension

Video game worlds are almost always implemented as some sort of simulated physical space. The player moves his avatar in and around this space or manipulates other pieces or characters in it. The physical properties of this space determine a great deal about the gameplay. Three of these properties are spatial dimensionality, scale, and boundaries.

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 Note

Even text adventures and point-and-click adventures have a physical dimension. The player moves from one location, usually called a room even if it's described as outdoors, to another. The connections between the rooms are abstractions, however, and don't have to make physical sense, which makes it possible to create illogical spaces in these kinds of worlds. Teleportation, such as Portal offers, also permits designers to make use of unrealistic spaces.

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#### Spatial Dimensionality

One of the first questions to ask yourself is how many spatial dimensions your physical space will have. It is essential to understand that the dimensionality of the game's physical space is not the same as how the game *displays* that space (the camera model) or how it implements the space in the software. How to implement the space and how to display it are separate but related questions. The former has to do with technical design, and the latter has to do with user interface design. Ultimately, all spaces must be displayed on the two-dimensional surface of the monitor screen unless you are devising an alternative reality game, or a game for 3D virtual reality gear like the Oculus Rift.

These are the typical dimensionalities found in video games:

- **2D.** Thanks to the explosion in casual and mobile gaming, most of the video games in the world still have only two dimensions. This design is especially noticeable in 2D side-scrolling games such as *Prince of Persia Classic,* a remake of the original *Prince of Persia* (see Figure 8.1). The prince can run left and right and jump up and down, but he cannot move toward the player (out of the screen) or away from him (into the screen). Two-dimensional worlds have one huge advantage when you're thinking about how to display them: The two dimensions of the world directly correspond to the two dimensions of the monitor screen, so you don't have to worry about conveying a sense of depth to the player. Some games with 2D game worlds still use 3D engines to display the world so that objects appear three-dimensional even though the gameplay does not use the third dimension.

**Figure 8.1** *Prince of Persia Classic,* a 2D side-scrolling game

**2.5D,** typically pronounced “two-and-a-half D.” This refers to game worlds that appear to be three-dimensional spaces, but in reality, consist of a series of 2D layers, one above the other. *StarCraft*, a war game, shows plateaus and lowlands, as well as aircraft that pass over obstacles and ground units. The player can place objects and move them horizontally within a layer with a fine degree of precision, but vertically an object must be in one plane or another; there is no in-between. Flying objects can’t move up and down in the air; they’re simply in the air layer as Figure 8.2 depicts.

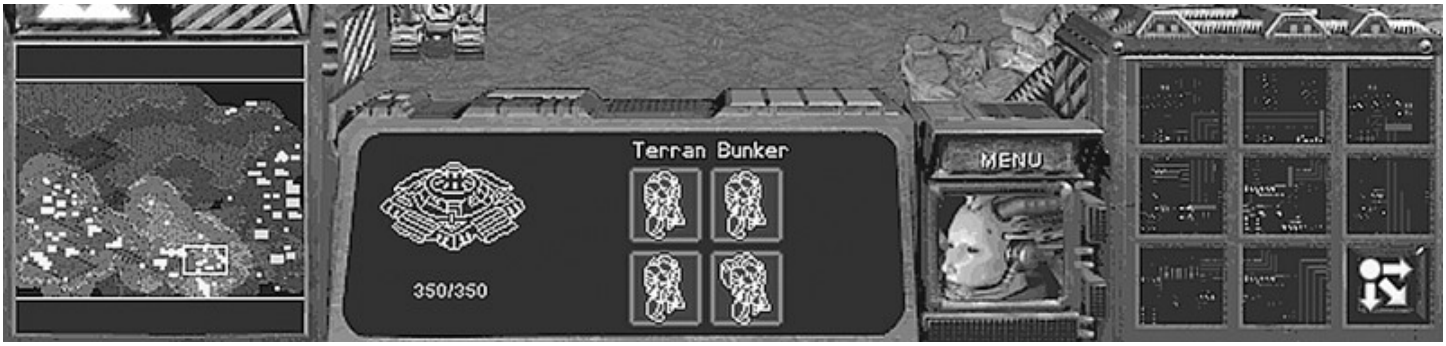


**Figure 8.2** *StarCraft,* with plateaus and lowlands visible

**3D.** Three true dimensions. Thanks to 3D hardware accelerators and middleware engines like Unity, 3D spaces are now easy to implement on hardware that supports them. They give the player a much greater sense of being inside a space (building, cave, spacecraft, or whatever) than 2D spaces ever can. With a 2D world, the player feels as if he is looking at it; with a 3D world, he feels as if he is in it. 3D worlds are great for games with exploration challenges or vehicle simulations such as *Need for Speed: Most Wanted* (see Figure 8.3). Most large games for personal computers and consoles now use three dimensions.


**Figure 8.3** *Need for Speed: Most Wanted,* a fully 3D environment

**4D.** If you want to include a fourth dimension for some reason (not counting time), implement it as an alternate version of the 3D game world rather than an actual four-dimensional space. In other

words, create two (or more) three-dimensional spaces that look similar but offer different experiences as the avatar moves among them. For example, the *Legacy of Kain* series presents two versions of the same 3D world, the spectral realm and the material realm, with different gameplay modes for each. The landscape is the same in both, but the material realm is lit by white light whereas the spectral realm is lit by blue light, and the architecture is distorted in the spectral realm (see Figure 8.4). The actions available to the player are different in each realm. The realms look similar but are functionally different places governed by different laws. In the movie version of *The Lord of the Rings*, the world that Frodo inhabits while he is wearing the Ring can be thought of as an alternate plane of reality as well, overlapping the real world but appearing and behaving differently.

**Figure 8.4** *Legacy of Kain: Soul Reaver*'s material (top) and spectral (bottom) realms, showing the same environment. Notice how the architecture is twisted in the spectral realm.

When you first think about the dimensionality of your game space, don't immediately assume that you want it to be three-dimensional because 3D seems more real or makes the best use of your machine's hardware. As with everything else you design, the dimensionality of your physical space must serve the entertainment value of the game.

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 Tip

Make sure all the dimensions will contribute meaningfully. Many games that work extremely well in two dimensions don't work well in three. *Lemmings* was a hit 2D game, but *Lemmings 3D* was nowhere near as successful because it was much more difficult to play. The addition of a third dimension detracted from the player's enjoyment rather than added to it.

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#### Scale

*Scale* refers to both the *absolute* size of the physical space represented, as measured in units meaningful in the game world (meters, miles, or light-years, for instance), and the *relative* sizes of objects in the game. If a game doesn't correspond to anything in the real world, the sizes of objects in its game world don't really matter. You can adjust them to suit the game's needs any way you like. But if you are designing a game that represents (if only partially) the real world, you'll have to address the question of how big everything should be to both look real and play well. Some distortion is often necessary for the sake of gameplay, especially in war games; the trick is to distort the scale without harming the player's suspension of disbelief too much.

In a sports game, a driving game, a flight simulator, or any other kind of game in which the player expects a high degree of verisimilitude, you have little choice but to scale things to their actual sizes. Similarly, you should scale most of the objects in first-person games accurately. Because the player's perspective is that of a person walking through the space, objects need to look right for their surrounding area. You might want to slightly exaggerate the size of critical objects such as keys, weapons, or treasure to make them more visible.

If you're designing a game with an aerial or isometric perspective, you will probably need to distort the scale of things somewhat. For example, in modern mechanized warfare, ground battles can easily take place over a 20-mile front, with weapons that can fire that far or farther. If you were to map an area this size onto a computer screen, an individual soldier or even a tank would be smaller than a single pixel—completely invisible. Although the display will normally be zoomed in on one small area

of the whole map, the scale of objects will have to be somewhat exaggerated so that the objects are clearly identifiable on the screen.

Similarly, games often distort the relative heights of people and the buildings or hills in their environment so that the player can see everything clearly. The buildings are often only a little taller than the people who walk past them. (See Figure 8.5 for an example.) Because the vertical dimension is seldom critical to the gameplay in products such as war games and role-playing games, it doesn't matter if heights are not accurate, so long as the distortion doesn't harm the player's immersion.

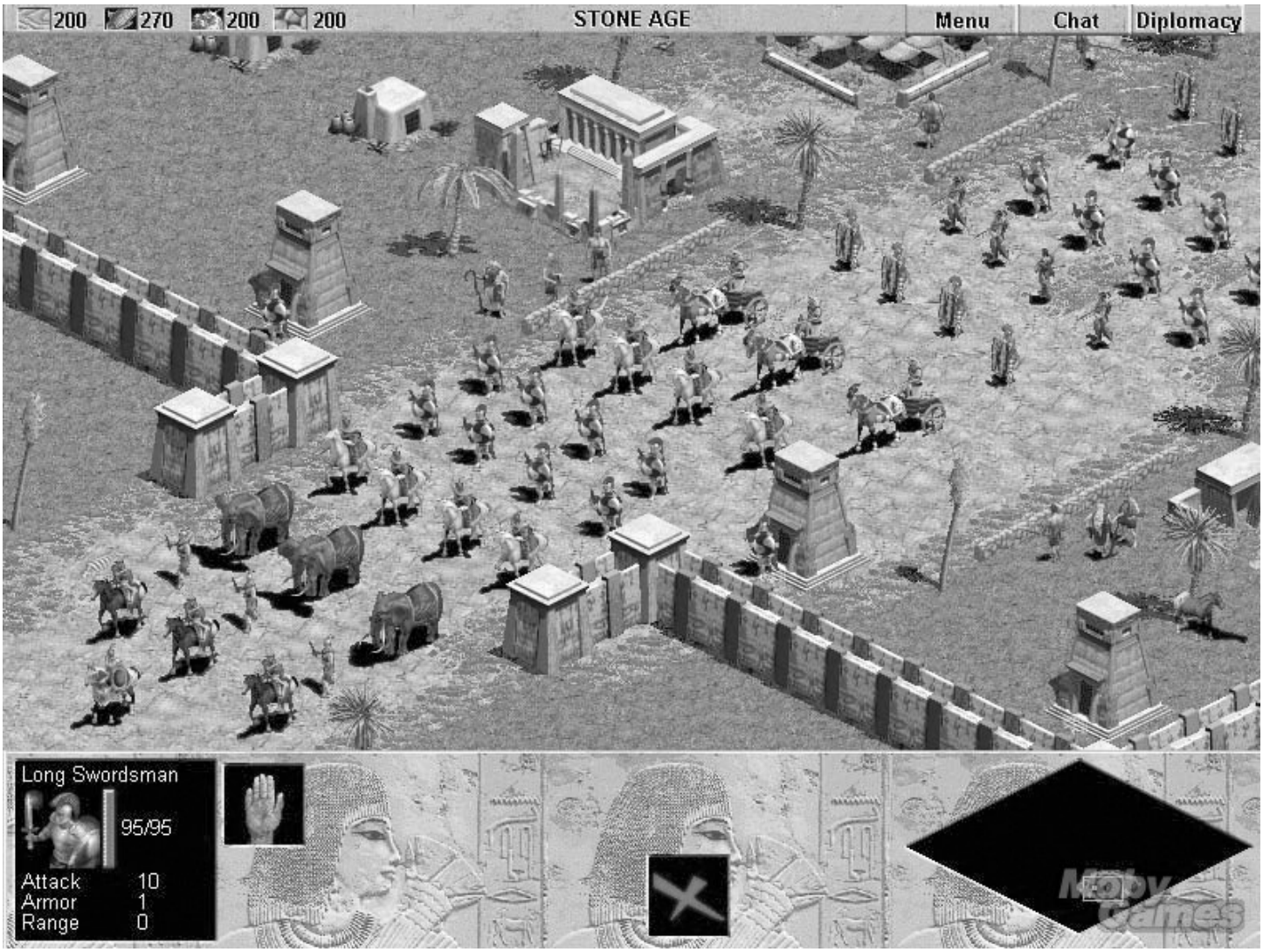


**Figure 8.5** In *Age of Empires,* the buildings are only a little taller than the people.

Designers often make another scale distortion between indoor and outdoor locations. When a character walks through a town, the player wants the character to get there reasonably quickly. When the character steps inside a building, however, and needs to negotiate doors and furniture, you should expand the scale to show these additional details. If you use the same animation for a character walking indoors and outdoors, this will give the impression that the character walks much faster outdoors than indoors. However, this seldom bothers players—they'd much rather have the game

proceed quickly than have their avatar take hours to get anywhere, even if that would be more accurate.

This brings up one final distortion, which is also affected by the game's notion of time (see the section "The Temporal Dimension," later in this chapter), and that is the relative speeds of moving objects. In the real world, a supersonic jet fighter can fly more than a hundred times faster than an infantry soldier can walk on the ground. If you're designing a game that includes both infantry soldiers and jet fighters, you're going to have a problem. If the scale of the battlefield is suitable for jets, it will take infantry weeks to walk across; if it's suitable for infantry, a jet could pass over it in the blink of an eye. One solution is to do what the real military does and implement transport vehicles for ground troops. Another is simply to accept a certain amount of distortion and create jets that fly only four or five times as fast as people walk (*StarCraft* uses this trick). As long as the jet is the fastest thing in the game, it doesn't really matter how much faster it is; the strike-and-retreat tactic that jets are good at will still work. Setting these values is all part of balancing the game, as Chapter 13, "Gameplay," discusses in more detail.

#### Boundaries

In board games, the edge of the board is the edge of the game world. With procedural rendering, we can create unlimited game worlds, but normally we establish artificial boundaries to avoid overwhelming the player or letting her go into regions where no gameplay has been implemented. Computer games are usually more immersive than board games, and they often try to disguise or explain away the fact that the world is limited to help maintain the player's immersion.

In some cases, the boundaries of a game world arise naturally, and we don't have to disguise or explain them. Sports games take place only in a stadium or an arena, and no one expects or wants them to include the larger world. In most driving games, the car is restricted to a track or a road, and this, too, is reasonable enough.

Setting a game underground or indoors helps to create natural boundaries for the game world. Everyone expects indoor regions to be of a limited size, with walls that define the edges. The problem occurs when games move outdoors, where players expect large, open spaces without sharply defined edges. A common solution in this case is to set the game on an island surrounded by water or have the outdoor setting be surrounded by some other kind of impassable terrain: mountains, swamps, or deserts. These boundaries establish both a credible and a visually distinctive "edge of the world." *World of Warcraft* uses dangerous enemies to keep players out of regions where they should not go, another believable approach.

In flight simulators, setting the boundaries of the world creates even more problems. Most flight simulators restrict the player to a particular area of the real world. Because there are no walls in the

air, there's nothing to stop the plane from flying up to the edge of the game world; when the player arrives there he can clearly see that there's nothing beyond. In some games, the plane just stops there, hovering in midair, and won't go any farther. In *Battlefield 1942,* the game tells the player that he has left the scene of the action and forcibly returns him to the runway.

A common solution to the edge-of-the-world problem is to allow the flat world to "wrap" at the top, bottom, and sides. Although the world is implemented as a rectangular space in the software, objects that cross one edge appear at the opposite edge—they wrap around the world. If the object remains centered on the screen and the world appears to move beneath it, you can create the impression that the world is spherical. Maxis's *Spore* actually displays the world as a sphere on the screen (see Figure 8.6).

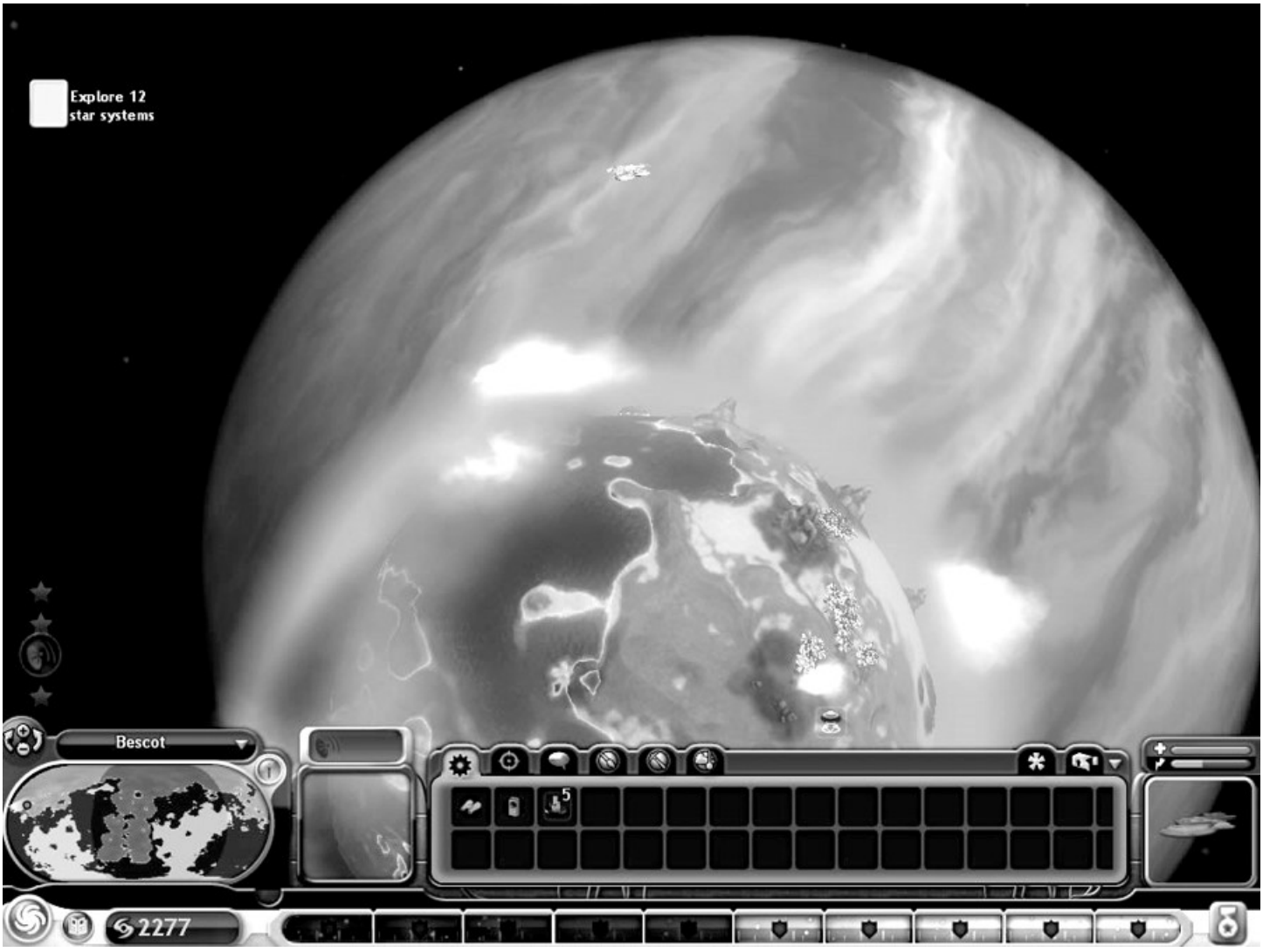


**Figure 8.6** Parts of *Spore* are set on a genuinely spherical world.

Finally, you can solve the problem of boundaries by requiring the player to move among defined locations. For example, you might let a player fly from planet to planet in the solar system by clicking on the planet she wants to go to. The player cannot go beyond the boundary of the solar system

because there are no planets in interstellar space. The user interface for movement creates a natural limit that requires no further explanation.

### The Temporal Dimension

The *temporal dimension* of a game world defines the way that time is treated in that world and the ways in which it differs from time in the real world.

In many turn-based and action games, the world doesn't include a concept of time passing: days and nights or seasons and years. Everything in the world idles or runs in a continuous loop until the player interacts with the game in some way. Occasionally, the player is put under pressure by being given a limited amount of real-world time to accomplish something, but this usually applies to only a single challenge and is not part of a larger notion of time in the game.

In some games, time is implemented as part of the game world but not part of the gameplay. The passage of time creates atmosphere and gives the game visual variety, but it doesn't change the game's challenges and actions. This usually feels rather artificial. If the player can do exactly the same things at night that she can during the day and no one ever seems to sleep, then there's little point in making the distinction. For time to really support the fantasy, it must affect the experience in ways besides the purely visual.

*Minecraft* is a good example of a game in which time is meaningful. Many of the enemies in *Minecraft* are inactive during the daytime. It's also darker and hard to see at night. In the underground portions of the game, day and night have less meaning, as you would expect.

#### Variable Time

In games that do implement time as a significant element of the gameplay, time in the game world usually runs much faster than in reality. Time in games also jumps (as it does in books and movies), skipping periods when nothing interesting is happening. Most war games, for example, don't bother to implement nighttime or require that soldiers get any rest. In reality, soldier fatigue is a critical consideration in warfare, but because sleeping soldiers don't make exciting viewing and certainly aren't very interactive, most games just skip sleep periods. Allowing soldiers to fight continuously without a pause permits the player to play continuously without a pause also.

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 Note

Bullet time or hero time, as seen in *Max Payne* and many other games, is another example of variable time. When the player engages in combat, the game automatically goes into a super slow-motion

mode.

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*The Sims*, a game about managing a household, handles this problem a different way. The simulated characters require rest and sleep for their health, so *The Sims* depicts day and night accurately. However, when all the characters go to sleep, the game speeds up considerably, letting hours go by in a few seconds. As soon as anyone wakes up, time slows down again.

*The Sims* is a rather unusual game in that time management is one of the most important challenges. The player is under constant pressure to have his characters accomplish all their chores and get time for sleep, relaxation, and personal development as well. The game runs something like 48 times as fast as real life, so it takes about 20 minutes of real time to play through the 16 hours of game-world daytime. However, the characters don't move 48 times as fast. Their actions look pretty normal, about as they would in real time. As a result, it takes them 15 minutes according to the game's clock just to go out and pick up the newspaper. This contributes to the sense of time pressure. Because the characters do everything slowly (in game terms), they often don't get a chance to water their flowers, which consequently die.

#### Anomalous Time

In *The Settlers: Rise of an Empire*, a complex economic simulation, a tree can grow from a sapling to full size in about the same length of time that it takes for an iron foundry to smelt four or five bars of iron. This is *anomalous time:* time that seems to move at different speeds in different parts of the game. Blue Byte, the developer of *The Settlers*, tuned the length of time it takes to do each of the many tasks in the game to make sure that the game as a whole would run smoothly. As a result, *The Settlers* is very well balanced at some cost to realism. However, *The Settlers* doesn't give the player a clock in the game world. There's no way to compare game time to real time, so in effect, the game world has no obvious time scale (see Figure 8.7).

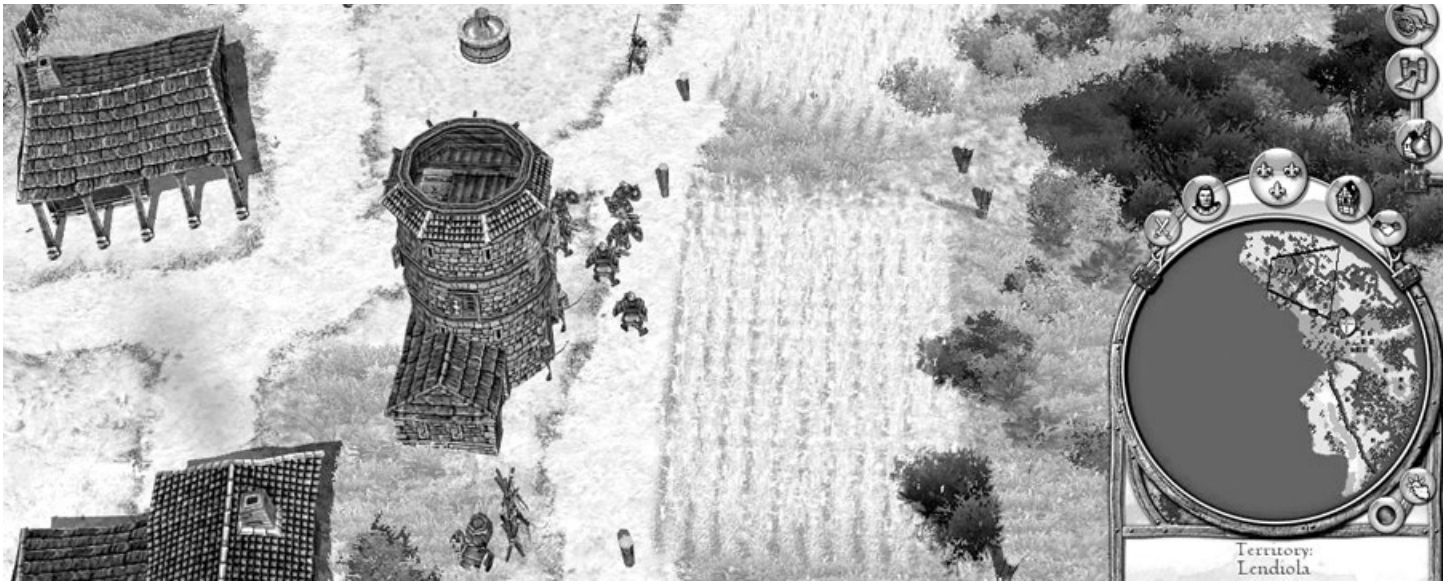



**Figure 8.7** Activities in *The Settlers: Rise of an Empire* take anomalous lengths of time, but the user interface does not include a clock.

Another example of anomalous time appears in *Age of Empires,* in which tasks that should take less than a day in real time (gathering berries from a bush, for example) seem to take years in game time according to the game clock. *Age of Empires* does have a time scale, visible on the game clock, but not everything in the world makes sense on that time scale. The players simply have to accept these actions as symbolic rather than real. As designers, we have to make them work in the context of the game world without disrupting the fantasy. As long as the symbolic actions (gathering berries or growing trees) don't have to be coordinated with real-time actions (warfare) but remain essentially independent processes, it doesn't matter if they operate on an anomalous time scale.

#### Letting The Player Adjust Time

In sports games and vehicle simulations, game time usually runs at the same speed as real time. A football game is, by definition, an hour long, but because the clock stops all the time, the actual elapsed time of a football game is closer to three hours. All serious computerized football games simulate this accurately. Verisimilitude is a key requirement of most sports games; if a game does not accurately simulate the real sport, the league might not approve of it, and its competitors are bound to point out the flaw. However, most such games also allow the players to shorten the game by playing 5- or 10-minute quarters instead of 15-minute quarters because most people don't want to devote a full three hours to playing a simulated football game. This is also a useful feature in testing; it takes far too long to test the product if you have to play a full-length game every time.

Flight simulators also usually run in real time, but there are often long periods of flying straight and level during which nothing of interest is going on. To shorten these periods, many games offer a way to speed up time in the game world by two, four, or eight times—in effect, make everything in the

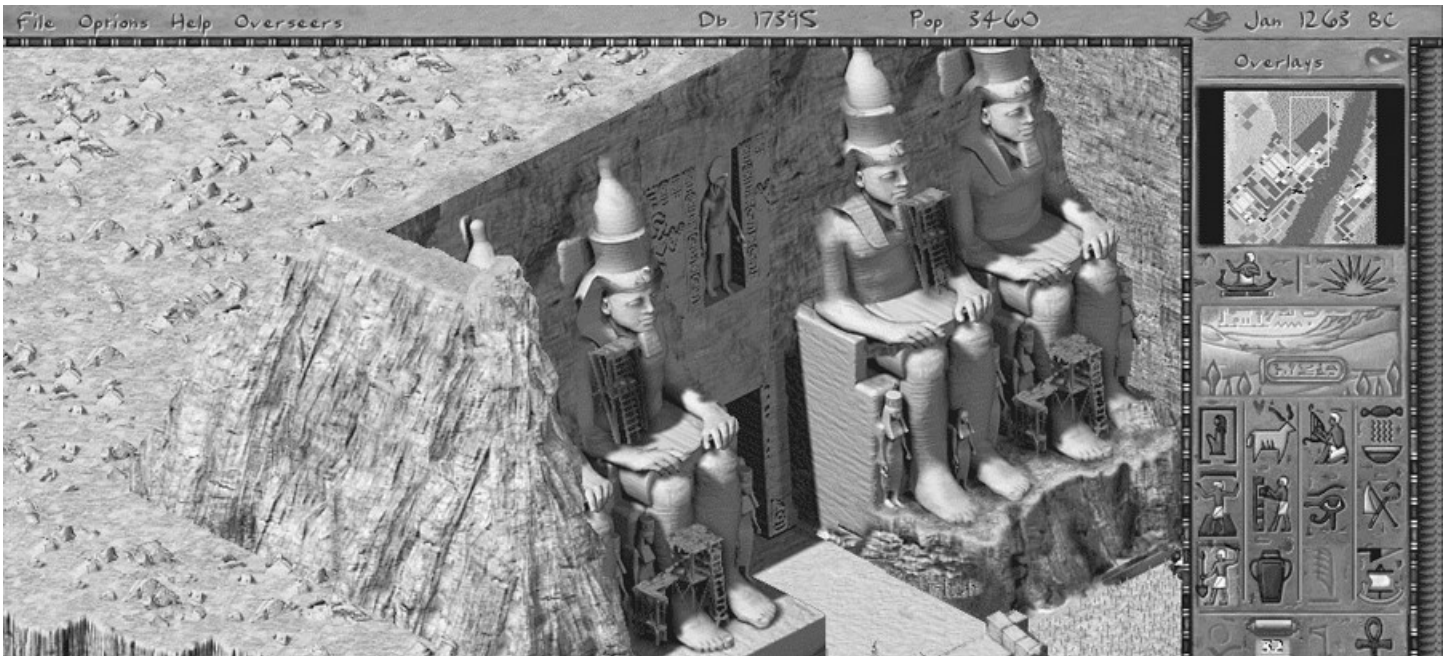
game world go faster than real time. When the plane approaches its destination, the player can return the game to normal speed and play in real time. *The Elder Scrolls V: Skyrim* also allowed the player to change the speed of game time.

## The Environmental Dimension

The environmental dimension describes the world's appearance and its atmosphere. You've seen that the physical dimension defines the properties of the game's space; the environmental dimension is about what's in that space. The environmental characteristics of the game world form the basis for creating its art and audio. We'll look at two particular properties: the cultural context of the world and the physical surroundings.

### Cultural Context

The cultural context of a game refers to its culture in the anthropological sense: the beliefs, attitudes, and values that the people in the game world hold, as well as their political and religious institutions, social organization, and so on—in short, the way those people live. These characteristics are reflected in the manufactured items that appear in the game: clothing, furniture, architecture, landscaping, and every other man-made object in the world. The culture influences not only what appears and what doesn't appear (a game set in a realistic ancient Egypt obviously shouldn't include firearms), but also how everything looks—including the user interface. *Cleopatra: Queen of the Nile* is an excellent example of a game's culture harmonizing with its user interface; see Figure 8.8. The way objects appear is affected not only by their function in the world, but also by the aesthetic sensibilities of the people who constructed them; for example, a Maori shield looks entirely different from a medieval European shield.



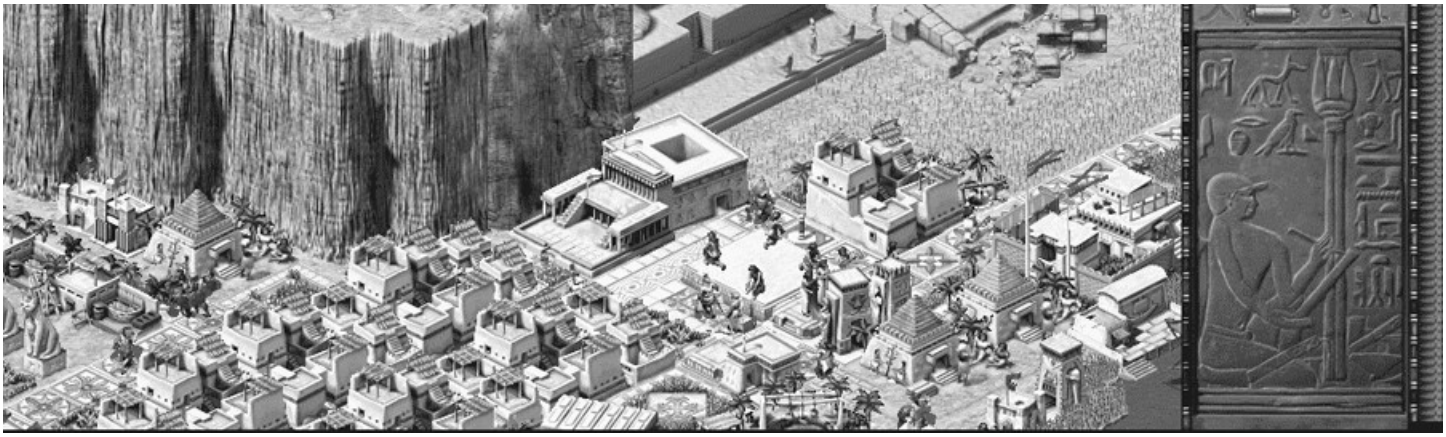


**Figure 8.8** The cultural context of *Cleopatra: Queen of the Nile* influences everything on the screen, including the icons and text.

The cultural context also includes the game's backstory. The *backstory* of a game is the imaginary history, either large-scale (nations, wars, natural disasters) or small-scale (personal events and interactions), that preceded the time when the game takes place. This prior history helps to establish why the culture is the way it is. A warlike people should have a history of warfare; a mercantile people should have a history of trading. In designing the backstory, don't go into too much depth too early, however. As Chapter 7, "Game Concepts," warned, the story must serve the game, not the other way around. Sometimes designers create a backstory purely to inspire the development team, without planning to build it into the game.

For most game worlds, it's not necessary to define the culture or cultures in great detail. A game set in your own culture can simply use the things that you see around you. The *SimCity* series, for example, is clearly set in present-day America (few European cities are so rectilinear), and it looks like it. But when your game's culture does not resemble your own, you need to think about how it is different, and how you will convey that to the player.

#### The Physical World

The physical aspects of the game world—its environment and contents—define what the game actually looks and sounds like. This is a part of game design in which it's most helpful to be an artist or to work closely with one. In the early stages of design, you don't need to make drawings of every single thing that can appear in the game world (although sooner or later someone will have to do just that). For the time being, create *concept sketches:* pencil or pen-and-ink drawings of key visual elements in the game. Depending on what your game is about, this can include buildings, vehicles, clothing, weaponry, furniture, decorations, works of art, jewelry, religious or magical items, logos or emblems, and on and on. See *Grim Fandango* (Figure 8.9) for a particularly distinctive example. The game's culture influences constructed artifacts in particular. A powerful and highly religious people are likely to have large symbols of their spirituality: stone temples or cathedrals. A warlike nomadic people have

animals or vehicles to carry their gear and weapons they can use on the move. (Note that these might be future nomads, driving robo-camels.)

Nor should you neglect the natural world. Games set in urban or indoor environments consisting entirely of manufactured objects feel sterile. Think about birds and animals, plants and trees, earth, rocks, hills, and even the sky. Consider the climate: Is it hot or cold, wet or dry? Is the land fertile or barren, flat or mountainous? These qualities, all parts of a real place, are opportunities to create a visually rich and distinctive environment.

If your world is chiefly indoors, of course, you don't have to think about nature much unless your character passes a window, but there are many other issues to think about instead. Where does the light come from? What are the walls, floors, and ceilings made of, and how are they decorated? Why is this building here? Do the rooms have a specific purpose, and if so, what? How can you tell the purpose of a room from its contents? Does the building have multiple stories? How does the player get from one floor to another?

The physical world includes sounds as well as sights: music; ambient environmental sounds; the particular noises made by people, animals, machinery, and vehicles. If you think about the sounds things make at the same time that you think about how they look, this helps you create a coherent world. Suppose you're inventing a six-legged reptilian saddle animal with clawed feet rather than hooves. How does that creature sound as it moves? Its scales might rattle a bit. Its feet are not going to make the characteristic clip-clop sound of a shod horse. With six legs, it will probably have some rather odd gaits, and those should be reflected in the sound it makes.


**Figure 8.9** *Grim Fandango* combines Aztec, Art Deco, and Mexican Day of the Dead themes.

The physical surroundings play a big role in setting the tone and mood of the game as it is played, whether it's the lighthearted cheerfulness of *Mario* or the grim realities of Dubai destroyed by a sandstorm in *Spec Ops: The Line* (see Figure 8.10). The sound, and especially the music, will contribute greatly to this. Think hard about the kind of music you want, and consider what genres will be appropriate. Stanley Kubrick listened to hundreds of records to select the music for *2001: A Space Odyssey*, and he astonished the world with his choice of "The Blue Danube" for the shuttle docking sequence. You have a similar opportunity when you design your game.


**Figure 8.10** A city destroyed by a sandstorm in *Spec Ops: The Line*

#### Detail

Every designer must decide how much detail the game world needs—that is to say, how richly textured the world will be and how accurately modeled its characteristics will be. Technical limitations and time constraints will necessarily restrict your ambitions. No football game goes to the extent of modeling each fan in the stadium, and few flight simulators model all the physical characteristics of their aircraft. Detail helps to support the fantasy, but it always costs—in development time and in memory or storage space on the player's machine. In an adventure game, it should, in principle, be possible to pick up everything in the world; in practice, this usually isn't technically practical. and there's a good reason not to allow the player to pick up anything even if it is feasible: It's confusing. The player knows that if he can pick up an object, it must be important for some reason; if he can't pick it up, it isn't important.

The camera model you choose, and the way that the player moves through the world, may influence your decisions about the level of detail. For example, in a small stadium such as the Wimbledon tennis courts, the athletes may be conscious of specific people in the crowd, so it makes sense to model them in some detail. In motorsports, however, the spectators will flash past in a blur, and there's no point in putting much effort into their appearance.

Here's a good rule of thumb for determining the level of detail your game will contain: Include as much detail as you can to help the game's immersiveness, *up to* the point at which it begins to harm the gameplay. If the player must struggle to look after everything you've given him, the game probably has too much detail. (This is one of the reasons war games tend to have hundreds rather than hundreds of thousands of units. The player in a war game can't delegate tasks to intelligent subordinates, so the numbers have to be kept down to a size that she can reasonably manage.) A spectacularly detailed game that's no fun to play doesn't sell many copies.

#### Defining A Style

In describing how your world is going to look, you are defining a visual style for your game that will influence a great many other things as well: the character design, the user interface, perhaps the manual, and even the design of the box and the advertising. You actually have two tasks to take on here: defining the style of things *in* your world (that is, its intrinsic style), and also defining the style of the artwork that will *depict* your world. They aren't the same. For example, you can describe a world whose architectural style is inspired by Buddhist temples but draw it to look like a *film noir* movie. or you could have medieval towns with half-timbered houses but depict them in a slightly fuzzy, Impressionistic style. You must choose both your content and the way in which you will present that content.

Both decisions will significantly influence the player's experience of the game, jointly creating a distinct atmosphere. In general, the style of depiction tends to superimpose its mood on the style of the object depicted. For example, a Greek temple might be architecturally elegant, but if its style of drawing suggests a Looney Tunes cartoon, players will expect something wacky and outrageous to take place there. The drawing style imposes its own atmosphere over the temple, no matter how majestic it is. For one example, take a look at *Naruto: Ultimate Ninja Storm* (see Figure 8.11). All the locations in *Naruto* are rendered in a flat-shaded style reminiscent of the comic book that inspired the game.


**Figure 8.11** *Naruto* overlays the architecture of a modern Japanese city, and many other places, with a comic book style.

Unless you're the lead artist for your game as well as its designer, you probably shouldn't—or won't be

allowed to—define the style by yourself. Your art team will have ideas of its own, and you should listen to those suggestions. The marketing department might insist on having a say as well. It's important, however, that you try to keep the style harmonious and consistent throughout your game. Too many games have been published in which different sections had wildly differing art styles because no one held and enforced a single overall vision.

 Tip

The choice of art style can have a significant effect on how long it takes to make the game's artwork, another reason to consult closely with the lead artist. If your game is not heavily dependent on a particular style, you might save time and money by using a different one.

#### Overused Settings

All too often, games borrow settings from one another or from common settings found in the movies, books, or television. A huge number of games are set in science fiction and fantasy worlds, especially the quasi-medieval, sword-and-sorcery fantasy inspired by J. R. R. Tolkien and *Dungeons & Dragons*, popular with the young people who used to be the primary—indeed, almost the only—market for computer games. But a more diverse audience plays games nowadays, and they want new worlds to play in. You should look beyond these hoary old staples of gaming. *Interstate '76* was inspired by 1970s TV shows. It includes cars, clothing, music, and language from that era, all highly distinctive and evocative of a particular culture. *Interstate '76* had great gameplay, but what really set it apart from its competitors was that it looked and sounded like nothing else on the market.

Especially if you are going to do science fiction or fantasy, try to make your game's setting distinctively different. At present, real spacecraft built by the United States or Russia look extremely functional, but as spacecraft become more common, and especially as we start to see personal spacecraft, we should expect them to exhibit stylistic variation as well. This is an area in which you have tremendous freedom to innovate.

 Note

If you use other cultures that you aren't familiar with in your game, be sure to check with people who are part of that culture to make sure that your portrayal isn't offensive. The Activision game *Gun,* set in the American Old West, provoked serious controversy with its portrayals of Native Americans.

The same goes for fantasy. Forget the same old elves, dwarves, wizards, and dragons (Figure 8.12).

Look to other cultures for your heroes and villains. Right now about the only non-Western culture portrayed with any frequency in games is Japanese (feudal, present-day, and future) because the Japanese make a lot of games and their style has found some acceptance in the West as well. But there are many more sources of inspiration around the world, and most are untapped. Around AD 1200, while the rulers of Europe were still holed up in cramped, drafty castles, Islamic culture reached a pinnacle of grace and elegance, building magnificent palaces filled with the riches of the Orient and majestic mosques of inlaid stone. Yet this proud and beautiful civilization seldom appears in computer games because Western game designers haven't bothered to learn about it or don't even know it existed. Set your fantasy in Valhalla, in Russia under Peter the Great, in the arctic tundra, at Angkor Wat, on Easter Island, or at Machu Picchu.


**Figure 8.12** Yet another quasi-medieval setting: *Armies of Exigo*

**Sources Of Inspiration**

Art and architecture, history and anthropology, literature and religion, clothing fashions, and product design are all great sources of cultural material. Artistic and architectural movements, in particular, offer tremendous riches: Art Nouveau, Art Deco, Palladian, Brutalism. If you haven't heard of one of these, go look it up now. Browse the web or the art, architecture, and design sections of a bookstore or public library for pictures of interesting objects, buildings, and clothing. Carry a digital camera around and take pictures of things that attract your eye; then post the pictures around your workspace to inspire yourself and your coworkers. Collect graphic scrap from anywhere that you find it. Try old copies of *National Geographic*. Visit museums of art, design, and natural history if you can get to them; one of the greatest resources of all is travel, if you can afford it. A good game designer is always on the lookout for new ideas, even when he's ostensibly on vacation.

It's tempting to borrow from our closest visual neighbor, the movies, because the moviemakers have already done the visual design work for us. *Blade Runner* introduced the decaying urban future; *Alien* gave us disgustingly biological aliens rather than little green men. The problem with these looks is that they've already been borrowed many, many times. You can use them as a quick-and-dirty backdrop if you don't want to put much effort into developing your world, and players will instantly recognize the world and know what the game is about. But to stand out from the crowd, consider other genres. *Film noir,* the Marx Brothers, John Wayne westerns, war movies from the World War II era, costume dramas of all periods—from the silliness of *One Million Years B.C.* to the Regency elegance of *Pride and Prejudice*, they're all grist for the mill.

Television goes through its own distinct phases, and because it's even more fashion-driven than the movies, it is ripe for parody. The comedies of the 1950s and 1960s and the nighttime soaps of the 1970s and 1980s all had characteristic looks that seem laughable today but that are immediately familiar to most adult Americans. This is not without risk; if you make explicit references to American popular culture, non-Americans and children might not get the references. If your gameplay is good enough, though, it shouldn't matter.

Comic books and illustrated children's books also have visually distinctive styles and can serve as sources of inspiration, particularly if you're making a 2D game. A number of games have been made from children's books, copying their art styles; one of the best was *The Fantastic Flying Books of Mr. Morris Lessmore*.

### The Emotional Dimension

The emotional dimension of a game world defines not only the emotions of the people in the world but, more important, the emotions that you, as a designer, hope to arouse in the player. For much of their history, games have been seen only as light entertainment without much emotional impact, and most casual games are still like that. But games such as *The Walking Dead* and *Journey* have proven

that it's possible to create emotionally rich games. Multiplayer games evoke the widest variety of emotions, because the players are socializing with real people and making friends (and, alas, enemies) as they play. Single-player games have to influence players' emotions with storytelling and gameplay. Action and strategy games are usually limited to a narrow emotional dimension, but other games that rely more heavily on story and characters can offer emotional content that deeply affects the player. Greater emotional variety enables us to reach the players who value it.

**Influencing The Player'S Feelings**

Games are intrinsically good at evoking feelings related to the player's efforts to achieve something. They can create "the thrill of victory and the agony of defeat," as the old ABC *Wide World of Sports* introduction used to say. Use the elements of risk and reward—a price for failure and a prize for success—to further heighten these emotions. Games can also produce frustration as a by-product of their challenges, but this isn't a good thing; some players tolerate frustration poorly and stop playing if it gets too high. To reduce frustration, build games with player-settable difficulty levels and make sure the easy level is genuinely easy. Excitement and anticipation, too, play large roles in many games. If you can devise a close contest or a series of stimulating challenges, you will generate these kinds of emotions. Construction and management simulations, whose challenges are usually financial, arouse the player's feelings of ambition, greed, and desire for power or control. They also offer the emotional rewards of creative play. Give the player a way to amass a fortune, then let her spend it to build things of her own design. The *SimCity* and various *Tycoon* games (*RollerCoaster Tycoon, Railroad Tycoon,* and so on), do this well. Artificial life games and god games such as *Spore* or *The Sims* let the player control the lives of autonomous people and creatures for better or worse, satisfying a desire to be omnipotent over a world of beings subject to the player's will. (This may not be a very admirable fantasy, but it's one that a lot of people enjoy having fulfilled.)

To create suspense, surprise, and fear, use the time-honored techniques of horror films: darkness, sudden noises, disgusting imagery, and things that jump out at the player unexpectedly. Don't overdo it, however. A gore-fest becomes tedious after a while, and Alfred Hitchcock demonstrated that the shock is all the greater when it occurs infrequently. For suspense to work well, the player needs to feel vulnerable and unprepared. Don't arm him too heavily; the world's a lot less scary when you're carrying a rocket launcher around. *Survival horror* is a popular subgenre of action game, as seen in the *Silent Hill* and *Resident Evil* series, that uses these approaches.

Another class of emotions is produced by interactions between characters and the player's identification with one of them. Love, grief, shame, jealousy, and outrage are all emotions that can result from such interactions. (See Figure 8.13 for a famous example.) To evoke them, you'll have to use storytelling techniques, creating characters that the player cares about and believes in and

credible relationships between them. Once you get the player to identify with someone, threaten that character or place obstacles in his path in a way that holds the player's interest. This is the essence of dramatic tension, whether you're watching Greek tragedy or reading *Harry Potter*. Something important must be at stake. The problem need not necessarily be physical danger; it can also be a social, emotional, or economic risk. The young women in Jane Austen's novels were not in imminent peril of death or starvation, but it was essential to their family's social standing and financial future for them to make good marriages. The conflict between their personal desires and their family obligations provides the tension in the novels.

**Figure 8.13** The death of Aeris, from *Final Fantasy VII*

You can further influence the player's feelings by giving her difficult moral choices to make, with varying consequences depending on her decision. *BioShock* is one of the best-known recent examples; as the player, you have the choice of whether to kill or to save creatures called Little Sisters (there are short- and long-term advantages to either strategy), and the ending of the game is different depending on what you choose to do.

A good many games set the danger at hyperbolic levels with extreme claims such as "The fate of the universe rests in your hands!" This kind of hyperbole appeals to young people, who often feel powerless and have fantasies about being powerful. To adults, it just sounds a bit silly. At the end of *Casablanca*, Rick said, "The problems of three little people don't amount to a hill of beans in this crazy world," but he was wrong. The whole movie, a movie still popular over a half century after its first release, is about the problems of those three little people. For the duration of the film, these problems hold us entranced. It isn't necessary for the fate of the world to be at stake; it is the fates of Rick, Ilsa, and Victor that tug at our hearts.

Finally, research shows that players value amusement highly. Comedy works best in adventure games, which tend to have more detailed characters than other genres, although role-playing games occasionally include funny moments or unexpected wisecracks from non-player characters. If your game is about an unrelentingly serious subject, you might want to include moments of comic relief just to lighten the tone from time to time. These have to be handled carefully, however, or they will seem inappropriate.

#### The Limitations Of Fun

*Weaver's Law: The quality of an entertainment is inversely proportional to the awareness of time engaged in it.*

—CHRIS WEAVER, FOUNDER OF BETHESDA SOFTWORKS

Most people think that the purpose of playing games is to have fun, but *fun* is a rather limiting term. It tends to suggest excitement and pleasure, either a physical pleasure such as riding a roller coaster, a social pleasure such as joking around with friends, or an intellectual pleasure such as playing cards or a board game.

The problem with striving for fun is that it tends to limit the emotional range of games. Suspense, excitement, exhilaration, surprise, and various forms of pleasure fall within the definition of fun, but not pity, jealousy, anger, sorrow, guilt, outrage, or despair.

Games don't only provide fun; they provide entertainment just as books, movies, and television do. You can entertain people in all sorts of ways. Movies with sad endings aren't fun in the conventional sense, but they're still entertaining. The potential of our medium to explore emotions and the human condition is much greater than the term *fun game* allows for; *Journey* is a highly popular example of a game that succeeded at moving beyond simple fun.

All that said, however, bear in mind that most publishers and players want fun. Too many inexperienced designers are actually more interested in showing how clever they are than in making sure the player has a good time; they place their own creative agenda before the player's enjoyment. As a designer, you must master the ability to create fun—light enjoyment—before you move on to more complex emotional issues. Addressing unpleasant or painful emotions successfully is a greater aesthetic challenge and may limit your audience somewhat.

#### You Can'T Paint Emotion By Numbers

The idea that games should include more emotional content and should inspire more emotions in players has been gaining ground in the game industry for several years. Unfortunately, this has produced a tendency to look for quick and easy ways to do it, mostly by relying on clichés. The young

man whose family is killed and who is obsessed by his desire for revenge or the beautiful princess who needs to be rescued both belong more to fairy tales than to modern fiction. That may be all right if your game aspires to nothing more, but it won't do if you're trying to create an experience with any subtlety. Contrast, for example, the simple themes of the early animation films and the more psychologically rich stories in the recent Pixar films.

Beware of books or articles that offer simple formulas for emotional manipulation: "If you want to make the player feel X, just do Y to the protagonist." An imaginative and novel approach to influencing the players' feelings requires the talents of a skilled storyteller. Paint-by-numbers emotional content has all the sensitivity and nuance of paint-by-numbers art.

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 Note

Serious games often address serious subjects, and while they are challenging and enjoyable, they often require players to confront difficult subjects such as abuse, illness, or the real costs of war or famine. Such games are seldom bestsellers; they are designed to inform rather than to make a lot of money.

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### The Ethical Dimension

The ethical dimension of a game world defines what right and wrong mean within the context of that world. At first glance, this might seem kind of silly—it's only a game, so there's no need to talk about ethics. But most games that have a setting, a fantasy component, also have an ethical system that defines how the player is supposed to behave. As a designer, you are the god of the game's world, and you establish its morality. When you tell a player that he must perform certain actions to win the game, you are defining those actions as good or desirable. Likewise, when you say that the player must avoid certain actions, you are defining them as bad or undesirable. The players who come into the world must adopt your standards or they will lose the game.

In some respects, the morality of a game world is part of its culture and history, which are part of the environmental dimension, but because the ethical dimension poses special design problems, it needs a separate discussion. The ethics of most game worlds deviate somewhat from those of the real world —sometimes they're entirely reversed. Games allow, even require, you to do things that you can't do in the real world. The range of actions that the game world permits is typically narrower than in the real world (you can fly your F-15 fighter jet all you want, but you can't get out of the plane), but often the permitted actions are quite extreme: killing people, stealing things, and so on.

#### Moral Decision-Making

On the whole, most games have simple ethics: clobber the bad guys, protect the good guys. It's not subtle but it's perfectly functional; that's how you play checkers. Not many games explore the ethical dimension in any depth. A few include explicit moral choices, but unfortunately, these tend to be namby-pamby, consistently rewarding good behavior and punishing bad behavior. Such preachy material turns off even children, not to mention adults. But you can build a richer, more involving game by giving the player tough moral choices to make. Ethical ambiguity and difficult decisions are at the heart of many great stories and, indeed, much of life. Should you send a platoon of soldiers to certain death to save a battalion of others? How would you feel if you were in the platoon?

In many role-playing games, you can choose to play as an evil character who steals and kills indiscriminately, but other characters will refuse to cooperate with you and might even attack you on sight. It's easier to get money by robbing others than by working for it, but you may pay a price for that behavior in other ways. Rather than impose a rule that says, "Immoral behavior is forbidden," the game implements a rule that says, "You are free to make your own moral choices, but be prepared to live with the consequences." This is a more adult approach to the issue than simply punishing bad behavior. Be aware, however, many countries' video game rating systems take a game's ethics into account. If you do permit immoral behavior in your game, it will probably get a rating indicating that it is not for children.

You must be sure to explain the ethical dimension of your game clearly in its introductory material or in mission briefings. For example, some games that have hostage-rescue scenarios make the death of a hostage a loss condition: If a hostage dies, the player loses. This means that the player has to be extra careful not to kill any hostages, even at the risk of his own avatar's life. In other games, the only loss condition is the avatar's death. In this case, many players shoot with complete abandon, killing hostages and their captors indiscriminately. In real life, of course, the truth is somewhere in between. Police officers who accidentally shoot a hostage are seldom prosecuted unless they've been grossly negligent, but it doesn't do their careers any good. You can emulate this by penalizing the player somehow. To be fair to the player, however, you need to make this clear at the outset.

The ethical dimension of multiplayer games, whether online or local, is an enormous and separate problem. Chapter 17, "Design Issues for Online Gaming," discusses this issue at length.

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 Note

*Call of Duty: Modern Warfare 2* included a level in which the player had to decide whether or not to kill civilians in order to protect his cover as he tried to infiltrate a terrorist cell. Even though the game was rated for adults, the player was given a choice, and the entire level was optional, the game caused a huge outcry. Many people are still uncomfortable with this kind of material.

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### A Word About Game Violence

It's not part of this book's mission to debate, much less offer an answer for, the problem of whether violent video games cause violent behavior in children or adults. This is a psychological question that only prolonged and careful study can resolve. Unfortunately, a good many people on both sides of the issue seem to have made up their minds already, and arguments continue to rage in government and the media, supported for the most part by very few facts.

For you, as a designer, however, consider these suggestions. The essence of many games is conflict, and conflict is often represented as violence in varying degrees of realism. Chess is a war game in which pieces are killed—removed from the board—but nobody objects to the violence of chess; it's entirely abstract. Football is a violent contact sport in which real people get injured all the time, but there are no serious efforts to ban football, either. The only way to remove violence from game-play is to prohibit most of the games in the world because most contain violence in some more-or-less abstract form. The issue is not violence, per se, but how violence is portrayed and the circumstances under which violence is acceptable.

Games get into political trouble when they have a close visual similarity to the real world but an ethical dimension that is strongly divergent from the real world. The game *Kingpin* encourages the player to beat prostitutes to death with a crowbar, with bloodily realistic graphics. Not surprisingly, it has earned a lot of criticism. On the other hand, *Space Invaders* involves shooting hundreds of aliens, but it is so visually abstract that nobody minds. In other words, the more a game resembles reality visually, the more its ethical dimension should resemble reality as well, or it's likely to make people upset. If you want to make a game in which you encourage the player to shoot anything that moves, you're most likely to stay out of trouble if those targets are nonhuman and just quietly disappear rather than break apart into bloody chunks. Tie your ethical realism to your visual realism.

Computer games are about bringing fantasies to life, enabling people to do things in make-believe that they couldn't possibly do in the real world. But make-believe is a dangerous game when it's played by people for whom the line between fantasy and reality is not clear. Young children (those under about age eight) don't know much about the real world; they don't know what is possible and what isn't, what is fantasy and what is reality. An important part of raising children is teaching them this difference. But until they've learned it, it's best to make sure that any violence in young children's games is suitably proportionate to their age. Graphic, realistic violence can be terrifying to children who have not yet learned to process it and is best avoided. For a detailed and insightful discussion of how children come to terms with violence, read *Killing Monsters: Why Children Need Fantasy, Super Heroes, and Make-Believe Violence* by Gerard Jones (Jones, 2002). Ultimately, the violence in a game should serve the gameplay and the game's audience. If it doesn't, then it's gratuitous and you should consider doing without it.

### Realism

Chapter 2, "Designing and Developing Games," introduces the concept of *realism* in the context of a discussion about core mechanics. All games, no matter how realistic, require some abstraction and simplification of the real world. Even the multimillion-dollar flight simulators used for training commercial pilots are incapable of turning the cockpit completely upside down. This event is so rare (we hope) in passenger aircraft that it's not worth the extra money it would take to simulate it.

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 Note

If you're mathematically inclined, think of realism as a vector over every aspect of the game, with values ranging from 0, entirely abstract, to 1, entirely realistic. However, no value ever equals 1 because nothing about a game is ever entirely realistic—if it were, it would be life, not a game.

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The degree of realism of any aspect of a game appears on a continuum of possibilities from highly representational at one end to highly abstract at the other. Players and game reviewers often talk about realism as a quality of an entire game, but in fact, the level of realism differs in individual components of the game. Many games have highly realistic graphics but unrealistic physics. A good many first-person shooters accurately model the performance characteristics of a variety of weapons—their rate of fire, size of ammunition clips, accuracy, and so on—but allow the player to carry about 10 of them at once with no reduction in speed or mobility. Therefore, realism is not a single dimension of a game world, but a multivariate quality that applies to all parts of the game and everything in it.

The representational/abstract dichotomy is mostly useful as a starting point when you're thinking about what kind of a game you want to create. On the one hand, if you're designing a cartoony action game such as *Ratchet & Clank,* you know that it's going to be mostly abstract. As you design elements of the game, you'll need to ask yourself how much realism you want to include. Can your avatar be hurt when she falls long distances? Is there a limit to how much she can carry at once? Do Newtonian physics apply to her, or can she change directions in midair?

On the other hand, if you're designing a game that people will expect to be representational—a vehicle or sports simulation, for example—then you have to think about it from the other direction. What aspects of the real world are you going to remove? Most modern fighter aircraft have literally hundreds of controls; that's why only a special group of people can be fighter pilots. To make a fighter simulation accessible to the general public, you'll have to simplify a lot of those controls. Similarly, a fighter jet's engine is so powerful that certain maneuvers can knock the pilot unconscious or even rip the plane apart. Are you going to simulate these limitations accurately, or make the game a little more abstract by not requiring the player to think about them?

Once again: Every design decision you make must serve the entertainment value of the game. In addition, every design decision must serve your goals for the game's overall degree of realism. Some genres demand more realism than others. It's up to you to establish how much realism you want and in what areas. You must also make sure that your decisions about realism don't destroy the game's harmony and balance. During the design process, you must continually monitor your decisions to see if they are meeting your goals.

## Summary

At this point, you should know when and where your game takes place. You will have answered a huge number of questions about what your world looks like, what it sounds like, who lives there, and how they behave. If you've done it thoroughly, your game world will be one in which a player can immerse himself, a consistent fantasy that he can believe in and enjoy being part of. The next step is to figure out what's going to happen there.

## Design Practice Exercises

**1.** Imagine that you could use any content you liked in a game without regard for copyright. Choose one of the following game genres and then select a painter, photographer, or filmmaker, and a composer or musician, whose work you would like to use to create the appropriate emotional tone for your game. Create a short presentation (PowerPoint or similar) that shows how the images and music work together for your purpose. The genres are action (survival horror subgenre), real-time strategy (modern warfare), or children's nonviolent adventure game.

**2.** Write an essay discussing two contrasting systems of morality in games you have played or in two games assigned by your instructor. What actions does each game reward, and what actions does it punish? Address the relationship between moral behavior in the two game worlds and moral behavior in the real world.

## Design Practice Questions

Ask yourself the questions about each of the following game world dimensions.

#### Physical Dimension

**1.** Does my game require a physical dimension? What is it used for? Is it an essential part of gameplay or merely cosmetic?

**2.** Leaving aside issues of implementation or display, how many imaginary spatial dimensions does my game require? If there are three or more, can objects move continuously through the third and higher dimensions, or are these dimensions partitioned into discrete "layers" or zones?

**3.** How big is my game world, in light-years or inches? Is accuracy of scale critical, as in a football game, or not, as in a cartoon-like action game?

**4.** Will my game need more than one scale, for indoor versus outdoor areas, for example? How many will it actually require?

**5.** How am I going to handle the relative sizes of objects and people? What about their relative speeds of movement?

**6.** How is my world bounded? Am I going to make an effort to disguise the "edge of the world," and if so, with what? What happens if the player tries to go beyond it?

#### Temporal Dimension

**1.** Is time a meaningful element of my game? Does the passage of time change anything in the game world even if the player does nothing, or does the world simply sit still and wait for the player to do something?

**2.** If time does change the world, what effects does it have? Does food decay, and do light bulbs burn out?

**3.** How does time affect the player's avatar? Does she get hungry or tired?

**4.** What is the actual purpose of including time in my game? Is it only a part of the atmosphere, or is it an essential part of the gameplay?

**5.** Is there a time scale for my game? Do I need to have measurable quantities of time, such as hours, days, and years, or can I just let time go by without bothering to measure it? Does the player need a clock to keep track of time?

**6.** Are there periods of time that I'm going to skip or do without? Is this going to be visible to the player, or will it happen seamlessly?

**7.** Do I need to implement day and night? If I do, what will make night different from day? Will it merely look different, or will it have other effects as well? What about seasons?

**8.** Will any of the time in my game need to be anomalous? If so, why? Will that bother the player? Do I need to explain it away, and if so, how?

**9.** Should the player be allowed to adjust time in any way? Why, how, and when?

#### Environmental Dimension

**1.** Is my game world set in a particular historical period or geographic location? When and where? Is

it an alternate reality, and if so, what makes it different from ours?

**2.** Are there any people in my game world? What are they like? Do they have a complex, highly organized society or a simple, tribal one? How do they govern themselves? How is this social structure reflected in their physical surroundings? Are there different classes of people, guilds, or specialized occupations?

**3.** What do my people value? Trade, martial prowess, imperialism, peace? What kinds of lives do they lead in pursuit of these ends? Are they hunters, nomadic, agrarian, industrialized, even postindustrial? How does this affect their buildings and clothing?

**4.** Are my people superstitious or religious? Do they have institutions or religious practices that will be visible in the game? Are there religious buildings? Do the people carry charms or display spiritual emblems?

**5.** What are my people's aesthetics like? Are they flamboyant or reserved, chaotic or orderly, bright or subtle? What colors do they like? Do they prefer straight lines or curves?

**6.** If there aren't any people in the game, what are there instead, and what do they look like and how do they behave?

**7.** Does my game take place indoors or outdoors, or both? If indoors, what are the furnishings and interior decor like? If outdoors, what is the geography and architecture like?

**8.** What are the style and mood of my game? How am I going to create them with art, sound, and music?

**9.** How much detail can I afford in my game? Will it be rich and varied or sparse and uncluttered? How does this affect the way the game is played?

#### Emotional Dimension

**1.** Does my game have a significant emotional dimension? What emotions will my game world include?

**2.** How does emotion serve the entertainment value of my game? Is it a key element of the plot? Does it motivate characters in the game or the player himself?

**3.** What emotions will I try to inspire in the player? How will I do this? What will be at stake?

#### Ethical Dimension

**1.** What constitutes right and wrong in my game? What player actions do I reward and what do I punish?

**2.** How will I explain the ethical dimensions of the world to the player? What tells her how to behave and what is expected of her?

**3.** If my game world includes conflict or competition, is it represented as violence or as something else (racing to a finish, winning an economic competition, outmaneuvering the other side)?

**4.** What range of choices am I offering my player? Are there both violent and non-violent ways to accomplish something? Is the player rewarded in any way for minimizing casualties, or is he punished for ignoring them?

**5.** In many games, the end—winning the game—justifies any means that the game allows. Do I want to define the victory conditions in such a way that not all means are acceptable?

**6.** Are any other ethical questions present in my game world? Can my player lie, cheat, steal, break promises, or double-cross anyone? Can she abuse, torture, or enslave anyone? Are there positive or negative consequences for these actions?

**7.** Does my world contain any ethical ambiguities or moral dilemmas? How does making one choice over another affect the player, the plot, and the gameplay?

**8.** How realistic is my portrayal of violence? Does the realism appropriately serve the entertainment value of the game?