GAME DESIGN
THEORY & PRACTICE
SECOND EDITION
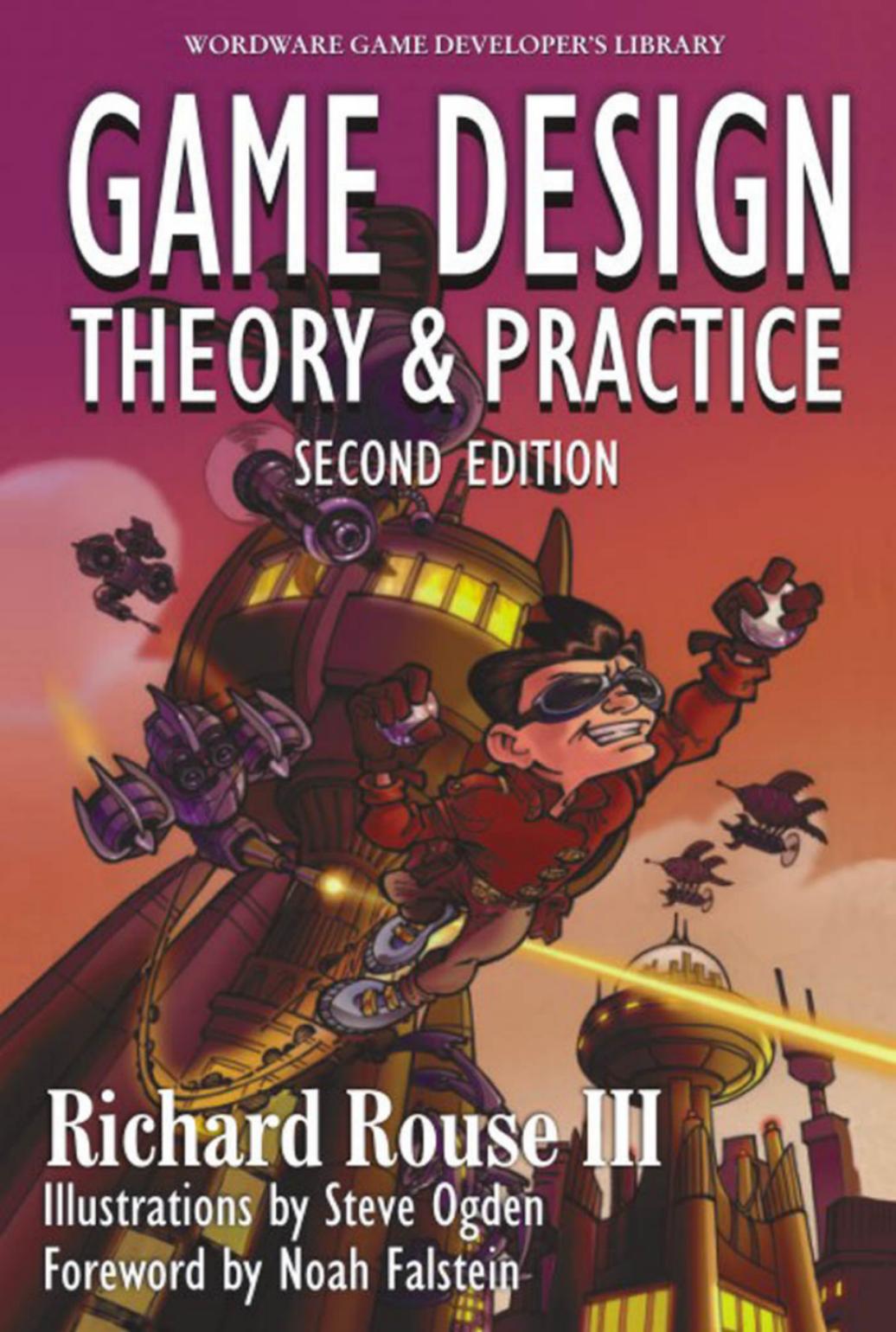
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Chapter 1:
What Players Want

"But when I come to think more on it, the biggest reason it has become that popular is Mr. Tajiri, the main developer and creator of *Pokemon*, didn't start this project with a business sense. In other words, he was not intending to make something that would become very popular. He just wanted to make something he wanted to play. There was no business sense included, only his love involved in the creation. Somehow, what he wanted to create for himself was appreciated by others in this country and is shared by people in other countries. ...And that's the point: not to make something sell, something very popular, but to love something, and make something that we creators can love. It's the very core feeling we should have in making games."

— Shigeru Miyamoto, talking about the creation of *Pokemon*

It may seem too simple a question to even ask, but determining what players want out of a game is a question all game designers must contemplate if they want to make great games. Further complicating matters, understanding what is enjoyable about a game experience is not knowledge that can be taught; on some level it must be an innate sense that a designer possesses. Designers must have the ability to assess whether something is fun for themselves, combined with the ability to listen to the opinions of others. Frank Capra, one of the most popular film directors from the golden age of Hollywood, often said that he was simply making films that appealed to his own tastes, and that it was luck they were enjoyed by so many other people. Similarly, one cannot simply look at the problem of "what players want" purely from a market-driven

standpoint and declare, "I don't understand it, but if they want it, I'm going to give it to them." In order to make a great game, you must first find it fun yourself, and hopefully this can be used to build something that appeals to others as well. But in the end, the spark must come from within.

Game designers spend a lot of time concerning themselves with what game players are looking for in a computer game. What can they put in their computer game that has not been done before and will excite players? Often game designers are so bereft of an idea of what will be fun and what gamers want that they instead only include gameplay ideas that have been tried before, rehashing what was popular with game players last year. Surely if players liked it last year, they will like it this year. But therein lies the rub. Gamers generally do not want to buy a game that is only a clone of another game, a "new" game that only offers old ideas and brings nothing original to the table. Nonetheless, successful games can be useful, not for cloning, but for analysis. As game designers, we can look at the games that have come out previously, that we have enjoyed in years past, and try to determine a set of directives that explain what compelled us to try those games in the first place, and why they held our interest once we started playing them.

Why Do Players Play?

The first question we should consider is: why do players play games? Why do they choose to turn on their computer or console and run *Halo* instead of visiting the art museum or going to see a movie? What is unique about computer games versus other human entertainment media? What do games offer that other activities do not? It is by understanding what is attractive about games that other media do not offer that we can try to emphasize the differences that separate our art form from others. To be successful, our games need to take these differences and play them up, exploiting them to make the best gameplay experience possible.

Players Want a Challenge

Many players enjoy playing games because they provide a challenge. This provides one of the primary motivating factors for single-player home games, where social or bragging rights motivations are less of an issue. Games can entertain players over time, differently each time they play, while engaging their minds in an entirely different way than a book, movie, or other form of art. In somewhat the same way someone might fiddle with a *Rubik's Cube* or a steel "remove the ring" puzzle, games force players to think actively, to try out different solutions to problems, to understand a given game mechanism.

When a person faces a challenge and then overcomes it, that person has learned something. It does not matter if that challenge is in a math textbook or in a computer game. Challenging games can be learning experiences. Players will learn from games, even if that learning is limited to the context of the game, such as how to navigate through the forest, survive a particularly hairy battle, or convince the duke that their intentions with his daughter are honorable. In the best games, players will learn lessons through gameplay that can be applied to other aspects of their life, even if they do not realize it. This may mean that they can apply problem solving methods to their

work, use their improved spatial skills to better arrange their furniture, or perhaps even learn greater empathy through role-playing. Many players thrive on and long for the challenges games provide, and are enriched by the learning that follows.

Players Want to Socialize

I have a friend who maintains that games are antisocial. This is, of course, absurd, as nearly all non-computer games require a social group in order to function. Games arose as a communal activity many millennia ago out of a desire to have a challenging activity in which a group of friends and family could engage. Computer game designers need to remember that the origin of games is tied to a social experience, and that this communal component is central to their appeal.

For most people, the primary reason they play games is to have a social experience with their friends or family. I am not talking about computer games here, but rather board and card games like chess, *Monopoly*, bridge, *Scrabble*, *Diplomacy*, or *The Settlers of Catan*. People like to play these games because they enjoy spending time with their friends and want to engage in a shared activity that is more social than going to a movie or watching TV. It is true that lots of people enjoy playing solitaire card games as well, but there are many more multi-player games than there are single-player. This is because people enjoy a social gameplaying experience.

But how does this apply to computer games? If one considers all the computer games ever created, the majority of them are single-player only experiences. But of course there are plenty of multi-player games, ranging from the "death-matches" found in *Doom* and its legion of imitators, to the classic *M.U.L.E.* game of wheeling and dealing, to the persistent worlds founds in MUDs (Multi User Dungeons) or their commercial equivalent, massively multi-player games such as *Ultima Online* and *EverQuest*. It is telling about the popularity of multi-player games that from the very inception of gaming there were multi-player games, ranging from *Pong* to some of the very first games developed on university mainframes that eventually evolved into MUDs.

Many death-match style multi-player games are basically adaptations of single-player games into multi-player incarnations, such as *Doom*, *Half-Life*, and *Halo*. These games typically provide a single-player game in addition to a multi-player game, both played with nearly the same set of rules and game mechanics. But even in these single-player-turned-multi-player games, players like to socialize while playing. Anyone who has ever played one of these games over a LAN in a room with a bunch of their friends can testify to this. These LAN-fests are usually rich with conversation as players shout back and forth to each other, bragging over their most recent "frag" or proclaiming how close they came to being killed. Games such as *Unreal Tournament* can also be played over the Internet, where the experience is quite a bit less social, since players may be miles apart and are thus only able to communicate through the computer. Indeed, lots of death-match or *Counter-Strike* enthusiasts have been known to use their office telephone systems to allow players who are not in the same building or even the same state to talk freely to each other while playing. Those not so well equipped still try to communicate by typing messages into the computer. Unfortunately, the high-intensity, fast-action nature of these games doesn't leave players much time to type messages to their opponents, if they hope to survive for long. But these

Death-match style multi-player games are adaptations of single-player shooter experiences. *Halo* comes with both single-player and multi-player modes.

games do still provide chat functionality, and players, when they are in a safe corner, after they have died, or between games, can send conversational messages to each other. At more hectic points in the gameplay the messages are short and typed on the fly, consisting of only a couple of letters. The fact that players still try to chat with each other in these high-velocity games is testament to the players' desire to socialize.

A separate category of multi-player games is what has come to be called "persistent universe" or "massively multi-player" games. These games tend to be more in the style of role-playing games, where players wander around "virtual worlds" and meet and interact with the other characters in these worlds, characters that are controlled by other players. These games tend to be played over large networks such as the Internet, instead of over LANs, and as a result players only socialize with each other through what they type into the computer. Since these games are considerably slower paced than death-match games, there is a much greater opportunity for players to chat with each other while playing. MUDs were the first popular incarnation of this style of game, and were played primarily by college students from the late 1980s on. At the time, these students were the main group of people with ample free time who had access to the Internet. These games are text-only, and provide their players with quests to accomplish in mostly fantasy settings. The quests, however, take a backseat to the socialization and role-playing, with players spending the vast majority of their time chatting with other players. A lot of people are drawn into playing these games as a way to interact with their friends, despite the fact that these friends are people they met online and who they have never seen in person. Indeed, the persistent worlds, MUDs in particular, draw in a legion of players who are not interested in playing any single-player computer games. These people play games in order to meet and talk to other people. The games are merely a compelling activity these people can engage in together while socializing.

As multi-player games have become more and more common, many game developers have been quick to point out their advantages in terms of competitive AI. Human opponents are much more unpredictable and challenging than any AI that could be reasonably created for most games. This, they suggested, is why people are drawn to multi-player games. Though this may be true, the biggest advantage of these multi-player games is that they transform computer games into truly social experiences, which is one of the largest motivating factors for people to play games.

Players Want a Dynamic Solitary Experience

Perhaps I have confused the reader by saying first that players want to socialize and then suggesting that players want a solitary experience. Of course the two do not happen at the same time; some game players are looking for a social experience, while others are looking for something dynamic that they can engage in by themselves. Sometimes friends are not available to play, or players are tired of their friends, or simply are tired of having to talk to other people all the time. Similar to the difference between going to a movie theater with an audience versus renting a video alone at home, the antisocial nature of single-player games attracts a lot of people who have had enough of the other members of the human race.

But games are distinct from other solitary experiences such as reading a book or watching a video since they provide the players with something to interact with, an experience that reacts to them as a human would, or at least in a manner resembling a human's reactions. The players are always in control, and can start and stop playing at any time. Thus the computer game "fakes" the interesting part of human interaction without all of the potential annoyances. In this way, people are able to turn to computer games for a dynamic and interactive yet unsocial experience.

Players Want Bragging Rights

Particularly in multi-player gaming, players play games to win respect. Being able to frag all of your friends in *Unreal Tournament* will force them to have a grudging respect for you: "Bob isn't very good in algebra class, but he sure can annihilate me in a deathmatch." Even in single-player games, players will talk with their friends about how they finished one game or about how good they are at another. Players will brag about how they played the whole game through on the hardest difficulty in only a few hours. If one looks at arcade games both old and new, the high-score table and the ability to enter one's name into the game, even if only three letters, provides a tremendous incentive for people to play a game repeatedly. Players who may not have much to brag about in their ordinary lives, who may not be terribly physically coordinated at sports or bookish enough to do well in school, can go down to the arcade and point out to all their friends their initials in the *Centipede* game. Gaming forums are full of people bragging about how they beat hot new game X in only five hours, and then taking pride in doling out advice to those who have not made it as far. Even without telling anyone, players can feel a tremendous sense of self-satisfaction when they beat a particular game. When players are victorious at a challenging game, they realize they can do something well, probably better than most people, which makes them feel better about themselves.

Players Want an Emotional Experience

As with other forms of entertainment, players may be seeking some form of emotional payoff when they play a computer game. This can be as simple as the adrenaline rush and tension of a fast-action game like *Doom*. It can be the great satisfaction of having built up a massive metropolis in *SimCity*. Or it can be considerably more complex, such as players' feeling of loss when their friendly robot companion sacrifices himself for them in Steve Meretzky's *Planetfall*. The emotions that games are able to evoke in players are much stronger than what can be experienced in other media where the experience is less immersive and considerably less personally involving. Unfortunately, many games' emotional ranges are limited to excitement/tension during a conflict, despair at repeated failure at a given task, and then elation and a sense of accomplishment when the players finally succeed. It may seem strange that players would play a game in order to feel despair, but many people enjoy watching plays that are tragedies or movies that have sad endings, or listening to music that is out-and-out depressing. People want to feel something when they interact with art, and it does not necessarily need to be a positive, happy feeling. Perhaps the sense of catharsis people obtain from these works makes them worth experiencing. Many classic arcade games, such as *Centipede* or *Space Invaders*, are unwinnable. No matter what players do, eventually the game will beat them. These games are, in a sense, lessons in defeat — tragedies every time players play them. Yet the players keep pumping in their quarters. This is why players' feelings of hopelessness as a game repeatedly bests them are not to be ignored. The players are feeling *something*, and at the highest level that is the goal of all art.

Emotional range is not something computer games have explored as much as they could. The example from *Planetfall* I cited above is one of the very few examples in computer games of players becoming attached to a character in a game, only to have him killed later on. Many developers are wary of making a game too sad. But in the case of *Planetfall*, the tragic story twist of that game was exploited for all the pathos it was worth by designer Steve Meretzky. It is a moment of tragedy that has stuck in many gamers' memories. Game designers would be wise to concentrate on expanding the emotional experience in games beyond excitement and accomplishment, into more unexplored and uncharted emotional territory.

Players Want to Explore

One of the main motivating forces that propels players through many level-based games is the desire to explore new spaces and see new environments. Anyone who has played a progression-based game like *Super Mario 64* or *Morrowind* knows the feeling of getting to a new and different level and wanting to just look around for a few moments before taking on the objectives at hand. And game exploration is not limited to spatial exploration. There is the exploration of different strategic choices in a game like *Civilization*, different types of resources to manipulate and combine in a game like *Magic: The Gathering*, and the exploration of the personalities of the characters you meet in RPGs such as *Wasteland* or *Fallout*. Though exploration is not completely integral to a pure gaming experience, the investigation of a fantastic world on one's own terms can be a rich experience that games excel at in a way no other media can.

Players Want to Fantasize

A major component of the popularity of storytelling art forms is the element of fantasy. Whether one considers novels, films, or comic books, many people experience these works to "get away" from their own "mundane" lives and escape to an altogether different world, one filled with characters that engage in exciting, interesting activities, travel to exotic locales, and meet other fascinating people. Certainly not all storytelling works portray exciting and glamorous protagonists, but there is certainly a large segment of works that is labeled "escapist." Some critics deride such escapist pieces of art, and indeed a lot of very good books, movies, and comics deal with more realistic settings and topics to great effect. The fact remains, however, that many people want to be transported to a world more glamorous than their own.

Computer games, then, have the potential to be an even more immersive form of escapism. In games, players get the chance to actually *be* someone more exciting, to control a pulp-fiction adventurer, daring swordsman, or space-opera hero. While in books or films the audience can merely watch as the characters lead exciting lives, in a well-designed computer game players will actually get the chance to live those lives themselves. Even better, these fantasy lives are not weighed down with the mundane events of life. In most games, players do not have to worry about eating, needing to get some sleep, or going to the bathroom. Thus, a game can create a fantasy life without the tedious details. And, most importantly, the level of fantasy immersion is heightened from that of other art forms because of the interactive nature of gaming.

Another part of the fantasy fulfillment element of computer games is enabling players to engage in socially unacceptable behavior in a safe environment. Many popular games have allowed players to pretend they are criminals or assassins. *Driver* is a good example of this. Though the back-story explains that the player character is actually playing an undercover police officer, players get to pretend they are criminals who must evade the police in elaborate car chases. There is a devilish thrill to outrunning police cars, especially for anyone who has ever been pulled over by the police. Though most players would never consider participating in car chases in real life, there's something tempting and enticing about engaging in taboo activities. The massive popular success of the *Grand Theft Auto* series is another testament to gamers' desire to break society's rules during gameplay. Computer games provide a good medium for players to explore sides of their personality that they keep submerged in their daily lives.

Players may also fantasize about events in history. If the player could have been Napoleon, would Waterloo have turned out differently? If the player were a railroad baron in the twentieth century, would he be able to create a powerful financial empire? A whole line of historical games, from wargames to economic simulations, allow players to explore events in history, and see how making different choices than those made by the historical figures involved will result in wildly different outcomes. While many people spend their time dwelling on the past, wondering how events could have transpired differently if alternate decisions had been made, games can give players a chance to actually find out how history might have been different.

Even without the elements of excitement and glamour, even if another person's life is not actually that exciting, it can be interesting to spend time as that person. Good computer games can provide players with the otherwise unavailable opportunity to see

the world through someone else's eyes. As millions of gamers can attest, it is fun to role-play and it is fun to fantasize.

Players Want to Interact

At the beginning of this discussion of what players want, I suggested that it was important to create an experience that players would choose over one of the many other entertainment options presented to them, such as watching television, reading a book, or going to a concert. The one common thread running through all of the "wants" I mentioned above is what our art form can do better than any other: provide an interactive experience. Though we may be envious of a film's special effects budget, a novel's ability to tell a gripping narrative, or the emotive power of a great piece of music, no other form allows the audience to be the guiding force in the experience they are having. Games have found their greatest successes when they have played up the interactive nature of the experience and provided our audience with something they cannot get anywhere else. Game designers need to constantly keep this in mind as they are developing their games if they are to have any chance of winning players' attention.

What Do Players Expect?

Once players have decided they want to play a given game because of one motivating factor or another, they will have expectations for the game itself. Beyond the game not crashing and looking reasonably pretty, players have certain gameplay expectations, and if these are not met, they will soon become frustrated and find another game to play. It is the game designer's job to make sure the game meets these expectations. Indeed, player frustration is the nemesis of every game designer, and it is important that game designers do everything possible to eliminate it. So once the gameplay begins, how do game designers minimize player frustration? Exactly what is it that players expect?

Players Expect a Consistent World

As players play a game, they come to understand what actions they are allowed to perform in the world, and what results those actions will produce. Few things are more frustrating than when players come to anticipate a certain result from an action and then the game, for no perceivable reason, produces a different result. Worse still is when the consequences of the players' actions are so unpredictable that players cannot establish any sort of expectation. Having no expectation of what will happen if a certain maneuver is attempted will only frustrate and confuse players, who will soon find a different, more consistent game to play. It is the consistency of actions and their results that must be maintained, for an unpredictable world is a frustrating one to live in.

Fighting games are a particularly appropriate example of the importance of predictable outcomes from actions. Players do not want a maneuver to work sometimes and fail other times, without a readily apparent reason for the different outcomes. For instance, in *Soul Calibur*, if players miss an attack, it has to be because their opponent jumped, blocked, was too far away, or some other reason that players can perceive. The players' perception of the reason for the move's failure is important to emphasize. It may be that the internal game logic, in this case the collision system, will know why the attack missed, but it is as bad as having no reason if players cannot easily recognize why

the maneuver failed. Furthermore, if only expert players can understand why their action failed, many novices will become frustrated as they are defeated for no reason they can understand. If a sword slash fails in a situation that closely resembles another situation in which the same slash succeeded, players will throw their hands up in frustration.

Pinball games are another interesting example. Of course, a pinball game is a completely predictable game-world, since it is based on real-world physics. Expert pinball players know this, and will use it to their advantage. But a problem arises with novices. Inexperienced players will often fail to see what they "did wrong" when the ball goes straight between their flippers or rolls down one of the side gutters. These players will curse the pinball game as a "game of luck" and not want to play anymore. Of course, the fact that players of different skill levels will have radically different levels of success at a given pinball game proves that it is not just a game of luck. But only those players who stick with the game through numerous early failures will find this out. I am not suggesting that pinball games should be abandoned or radically simplified, but one of their shortcomings is that they alienate new players who cannot see the connections between their actions and the outcome of the game.

Players Expect to Understand the Game-World's Bounds

When playing a game, players want to understand which actions are possible and which are not. They do not need to immediately see which actions are needed for a given situation, but they should understand which actions are possible to perform and which are outside the scope of the game's play-space.
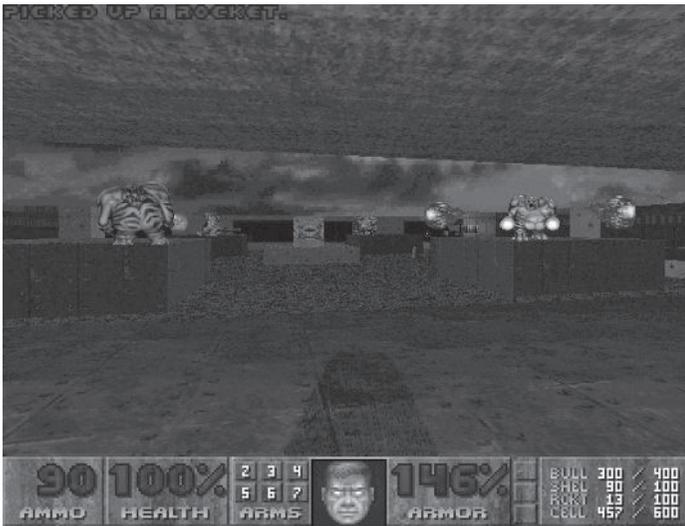
In *Doom II*, the player will not expect to be able to start a conversation with the monsters he is attacking.

For instance, in *Doom*, players will intuitively figure out that they are not going to be able to hold a discussion with the demons they are fighting. Players will not even want to initiate a conversation with a demon during which they suggest surrender as its best course of action. Players understand that such interpersonal discussion is out of the scope of the game. Suppose that *Doom* had included a monster late in the game, a

foe that could only be defeated if players were friendly to it, winning it over with their witty conversation. Players would have been frustrated, since they came to understand, through playing the levels that led up to that level, that in *Doom* all that is needed for victory is to blast everything that moves, while avoiding getting hit. Talking is completely out of the scope of the game.

Of course, a chatty monster in *Doom* is an extreme example of a game having unpredictable bounds, but plenty of games break this design principle. These games have players performing actions and completing levels using a certain type of game mechanism, and then later on insert puzzles that can only be solved using an entirely new mechanism. The problem is that the players have been taught to play the game a certain way, and suddenly the game requires players to do something completely different. Once players come to understand all of the gameplay mechanisms that a game uses, they don't want new, unintuitive mechanisms to be randomly introduced.

Players Expect Reasonable Solutions to Work

Once players have spent some time playing a game, they come to understand the bounds of the game-world. They have solved numerous puzzles, and they have seen what sorts of solutions will pay off. Later in the game, then, when faced with a new puzzle, players will see what they regard as a perfectly reasonable solution. If they then try that solution and it fails to work for no good reason, they will be frustrated, and they will feel cheated by the game.

This sort of difficulty in game design is particularly true in games that try to model the real-world to some degree. In the real-world there are almost always multiple ways to accomplish a given objective. Therefore, a computer game set in the real-world must also try to allow reasonable and logical solutions to a problem to result in success. Of course, a designer always provides at least one solution to a puzzle, and that solution may be perfectly reasonable. But there may be other equally reasonable solutions, and unless the designer makes sure those solutions work as well, players will discover and attempt these non-functioning alternate solutions and will be irritated when they do not work. It is the game designer's task to anticipate what players will try to do in the game-world, and then make sure that something reasonable happens when players attempt that action.

Players Expect Direction

Good games are about letting the players do what they want, up to a point. Players want to create their own success stories, their own methods for defeating the game, something that is uniquely theirs. But at the same time, players need to have some idea of what they are supposed to accomplish in this game. Not having direction is a bit too much like real life, and players already have a real life. As I have discussed, many gamers are probably playing the game in order to get away from their real lives, to fantasize and escape. They usually do not play games in order to simulate real life on their computer.

Thus, players want to have some idea of what their goal is and be given some suggestion of how they might achieve that goal. With a goal but no idea of how to achieve it, players will inevitably flail around, try everything they can think of, and become frustrated when the maneuvers they attempt do not bring them any closer to their goal. Of

course, without an idea of what their goal is, players are left to wander aimlessly, perhaps enjoying the scenery and marveling at the immersive game-world. Yet without something to do in that game-world, it has failed as a game. If players do not know what their goal is, the goal might as well not exist.

SimCity 3000 is the third in a series of city simulation "software toys," which let users play without giving them a specific goal.

The classic example of the goal-less game is *SimCity*. In fact, Will Wright, the game's creator, calls it a "software toy" instead of a game. *SimCity* is like a toy with which players can do whatever they want, without ever explicitly being told that they have failed or succeeded. In some ways *SimCity* is like a set of Legos, where players can build whatever they desire just for the thrill of creation. The trick, however, is that *SimCity* is a city simulator, wherein players are allowed to set up a city however they want. But since the game simulates reality (constructing and running a city), and players know what is considered "success" in reality (a booming city full of lovely stadiums, palatial libraries, and happy citizens), they will naturally tend to impose their own rules for success on the game. They will strive to make their idea of the perfect city, and keep its citizens happy and its economy buoyant. In a subtle way, players are directed by their own experience with reality. If *SimCity* had been a simulation of a system that players were completely unfamiliar with, it would certainly have been less popular. Indeed, Wright's games that are based in concepts average users are considerably less familiar with (such as *SimAnt* and especially *SimEarth*) have found considerably less popular success. Though *SimCity* does not explicitly have a goal, the very nature of the game and its grounding in a widely understood reality encourages players to come up with their own goals. And so, what starts out as a toy becomes a game, and thus players are compelled to keep playing.

Players Expect to Accomplish a Task Incrementally

Once players understand what their goal in the game-world is, they like to know that they are on the right track toward accomplishing that goal. The best way to do this is to provide numerous sub-goals along the way, which are communicated to players just as

clearly as the main goal. Players are rewarded for achieving these sub-goals just as they are for the main goal, but with a proportionally smaller reward. Of course one can take this down to any level of detail, with the sub-goals having sub-sub-goals and so forth, as much as is necessary to clue players in that they are on the right track.

Of course, not every goal needs to be communicated to the players via text. For example, in a story-based shooter such as *Call of Duty*, there are macro-goals that are communicated via text to players on the "mission objectives" screen. There are an average of four objectives on any given level. Beyond that, though, the game is littered with sub-goals (such as "clear out the machine gun nests") that players intuitively figure out along the way. For accomplishing these goals, players are rewarded by congratulatory dialog from their fellow soldiers, the health and ammo they will be able to collect from the fallen German soldiers, and the ability to access a new area of the level. If one takes it to a truly micro level, each enemy that players must kill can be considered a mini-objective with tangible rewards such as seeing the foe fall over dead, the fact that he stops being a threat to players, and players' ability to collect his weaponry. Platformer-style games such as *Ratchet & Clank* are particularly good at providing incremental micro-goals, with all of the thousands of bolts players are able to pick up throughout the game each helping them a tiny bit toward their larger goal of buying the super weapon to use against the giant enemy. The great platformer games all use these incremental pick-up rewards to pull players through their levels.

Without providing feedback of this kind (no matter how small it is), especially if the steps necessary to obtain a goal are particularly long and involved, players may well be on the right track and not realize it. When there is no positive reinforcement to keep them on that track, players are likely to grow frustrated and try something else. And when they cannot figure out the solution to a particular obstacle, they will become frustrated, stop playing, and tell all their friends what a miserable time they had playing your game.

Players Expect to Be Immersed

A director of a musical I was once in would become incensed when actors waiting in the wings would bump into the curtains. She suggested that once the audience sees the curtains moving, their concentration is taken away from the actors on the stage and their suspension of disbelief is shattered. They are reminded that it is only a play they are watching, not real at all, and that there are people jostling the curtains surrounding this whole charade. Perhaps exaggerating a bit, this director suggested that all of Broadway would collapse if the curtains were seen shaking.

But she had a point, and it is a point that can be directly applied to computer games. Once players get into a game, they are progressing through various challenges, they have a good understanding of the game's controls, and they are role-playing a fantasy. They have forgotten that they are playing a game at all, just as a film audience may forget they're in a theater or a book's reader may become completely swept up in the lives of the story's characters. Commonly referred to as the "suspension of disbelief," this is the point when a piece of art can be its most affecting on its audience. Once their disbelief is suspended, players do not want to be snapped out of their experience. For starters, a game should never crash, as that would be the most jarring disruption possible. Beyond that, the littlest glitch in the game can immediately bring players out of

their trance-like immersion. If a character that is supposed to be walking on the ground starts walking into the air for no recognizable reason, players will realize it is a bug and their suspension of disbelief will be lost. If players come to a puzzle, figure out a perfectly reasonable solution to it, and that solution does not work, players will again be reminded that they are "only" playing a computer game. If the game's GUI is not designed to be easy to read, transparent, and stylistically consistent with the rest of the game-world art, it will stick out and ruin their immersion. All of these pitfalls and countless others detract from players' feeling of immersion, and the more players are rudely awakened from their game-world fantasy, the harder it is to re-immerse them in it. Remember that many players want to play games in order to fulfill fantasies. It is very hard to fulfill a fantasy when the game's idiosyncrasies keep reminding players that it is just a game.
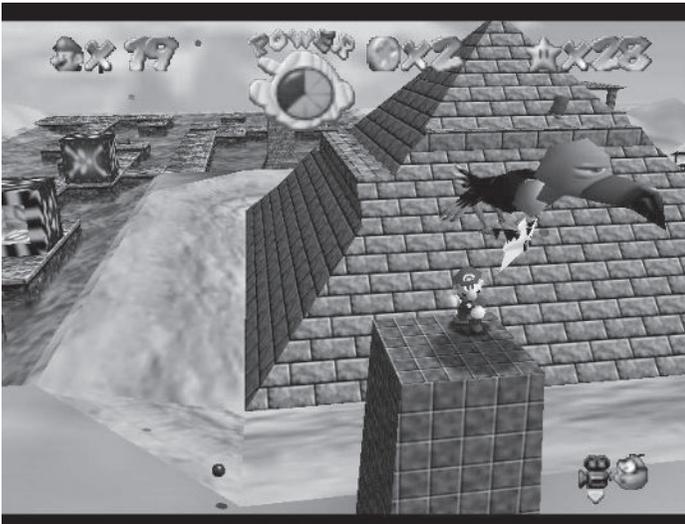
Despite all his fame, Mario does not have a very distinct personality. He is pictured here in *Super Mario 64*.

Another important component of player immersion is the character that players are controlling in the game. Most all games are about role-playing to some extent. And if the character players are controlling, their surrogate in the game-world, is not someone they like or can see themselves as being, their immersion will be disrupted. For instance, in the third-person action/adventure game *Super Mario 64,* players are presented with a character to control, Mario, who does not have a very distinct personality. Mario has a fairly unique look in his pseudo-plumber getup, but he never really says much, and acts as something of a blank slate on which players can impose their own personality. On the other hand, some adventure games have starred characters that acted like spoiled brats, and players have to watch as their character says annoying, idiotic things over and over again. Each time the character says something that players would never say if they had the choice, they are reminded that they are playing a game and that they are not really in control of their character as much as they would like to be. In order for players to become truly immersed, they must come to see themselves as their game-world surrogate.

Players Expect Some Setbacks

Players tend not to enjoy games that can be played all the way through the first time. If the game is so unchallenging that players can storm right through it on their first attempt, it might as well not be a game. If they wanted something that simple they might as well have watched a movie. Remember that gamers are drawn to playing games because they want a challenge. And a challenge necessarily implies that the players will not succeed at first, and that many attempts must be made to overcome obstacles before they are finally successful. A victory that is too easily achieved is a hollow victory. It is not unlike winning a fistfight with someone half your size.

It is important to understand that players want setbacks because of their own shortcomings, not because of the idiosyncrasies of the game they are playing. When players fail, they should see what they should have done instead and they should instantly recognize why what they were attempting failed to work out. If players feel that the game defeated them through some "trick" or "cheap shot," they will become frustrated with the game. Players need to blame only themselves for not succeeding, but at the same time the game must be challenging enough that they do not succeed right away.

It is also a good idea to let players win a bit at the beginning of the game. This will suck players into the game, making them think, "this isn't so hard." Players may even develop a feeling of superiority to the game. Then the difficulty must increase or "ramp up" so that players start to fail. By this time players are already involved in the game, they have time invested in it, and they will want to keep playing, to overcome the obstacle that has now defeated them. If players are defeated too early in the game, they may decide it is too hard for them or not understand what sort of rewards they will receive if they keep playing. If a game allows players to win at first, they will know that success is possible and enjoyable and will try extra hard to overcome what has bested them.

Players Expect a Fair Chance

Players do not want to be presented with an obstacle that can only be surmounted through trial and error, where an error results in their character's death or the end of their game. Players may be able to figure out the proper way to overcome the obstacle through trial and error, but there should be some way to figure out a successful path on their first try. So, extending this rule to the whole game, extremely observant and skilled novice players should be able to progress through the entire game without dying. It may be that no players will ever be this skilled on their first time playing, and, as we discussed, ideally the designer wants players to have many setbacks before completing the game. However, it must be theoretically possible for players to make it through on their first try without dying. If players keep dying from each shot-in-the-dark attempt around an obstacle, they will realize that, due to short-sighted design, there was no real way to avoid all of these deaths. They will be frustrated, they will curse the game, and soon they will not waste their time with it any longer.

Players Expect to Not Need to Repeat Themselves

Once players have accomplished a goal in a game, they do not want to have to repeat their accomplishment. If the designer has created an extremely challenging puzzle, one that is still difficult to complete even after players have solved it once, it should not be overused. For instance, the same painfully difficult puzzle should not appear in an identical or even slightly different form in multiple levels of an action/adventure, unless defeating the puzzle is a lot of fun and the rewards are significantly different each time the puzzle is completed. If it is not a lot of fun to do, and players have to keep solving it throughout the game, they will become frustrated and will hate the game designers for their lack of creativity in not coming up with new challenges.

Of course, many games are built on the principle of players repeating themselves, or at least repeating their actions in subtly varied ways. Sports games such as *NFL Blitz* and racing games such as *Project Gotham Racing* are all about covering the same ground over and over again, though the challenges presented in any one playing of those games are unique to that playing. Classic arcade games like *Centipede* and *Defender* offer roughly the same amount of repetition. *Tetris* is perhaps the king of repetitive gameplay, yet players never seem to grow tired of its challenge. The key component of these games that makes their repetition acceptable is that these games are built purely upon their game mechanics and the enjoyment players derive from various permutations of them. In games where exploration is a key part of the players' enjoyment and in which the challenges presented in any specific playing are fairly static and unchanging, players do not wish to unduly repeat themselves. In these games, after exploring a game-world once, subsequent explorations are significantly less interesting. While every time players engage in a game of *Tetris, Defender, Project Gotham Racing*, or *NFL Blitz* the game is unique, every time players play *The Legend of Zelda: The Wind Waker, Doom*, or *Baldur's Gate* the challenges presented are roughly the same. Therefore, players do not mind the repetition in the former games while they will quickly become frustrated when forced to repeat themselves in the latter.

Game players' lack of desire to repeat themselves is why save-games were created. With save-games, once players have completed a particularly arduous task they can back up their progress so they can restore to that position when they die later. Players must be given the opportunity to save their work after a huge, tricky challenge has finally been overcome. Allowing players to save their game prevents them from having to repeat themselves.

Some games will even automatically save players' games at this newly achieved position, a process sometimes known as checkpoint saving. This method is somewhat superior since often players, having succeeded at an arduous task, will be granted access to a new and exciting area of gameplay, one that they will immediately want to explore and interact with. Often, in their excitement, they will forget to save. Then, when they are defeated in the new area, the game will throw them back to their last save-game, which they had made prior to the challenging obstacle. Now players have to make it through the challenging obstacle once again. However, if the game designers recognize that the obstacle is a difficult one to pass, they can make the game automatically save the players' position, so that when players die in the new area, they are able to start playing in the new area right away. Indeed, automatic saving provides players with a more immersive experience: every time players access a save-game screen or

menu, they are reminded that they are playing a game. If players can play through a game without ever having to explicitly save their progress, their experience will be that much more transparent and immersive.

However, it is important to note that automatic saves should not be used as a replacement for player-requested saves, but should instead work in conjunction with them. This way players who are accustomed to saving their games will be able to do so whenever they deem it appropriate, while gamers who often forget to save will be allowed to play all the way through the game without ever needing to hit the save key. Many developers are concerned that allowing players to save anywhere removes a key element of tension for the player. Indeed, if players can save after each tiny, incremental step they make, the game will be significantly less challenging. However, it is important to remember two fundamental things. First and foremost, if players truly want to ruin their experience by saving constantly, we should allow them to do that, because games are supposed to be about empowering players to do whatever they want to do. Secondly, by not allowing players to save whenever they want, they will be forced to do ridiculous things such as leave their game system on overnight because a parent or spouse has demanded that bedtime has arrived but they do not want to lose their progress. If games are supposed to be the most interactive medium, game designers need to make sure they are at least as interactive as a DVD player or a book, and thus allow players to stop the activity and save their progress at any point they desire.

Players Expect to Not Get Hopelessly Stuck

There should be no time while playing a game that players are incapable of somehow winning, regardless of how unlikely it may actually be. Many older adventure games enjoyed breaking this cardinal rule. Often in these games, if players failed to do a particular action at a specific time, or failed to retrieve a small item from a location early in the game, they would be unable to complete the game. The problem was that players would not necessarily realize this until many hours of fruitless gameplay had passed. The players' game was essentially over, but they were still playing. Nothing is more frustrating than playing a game that cannot be won.

As an example, modern 3D world exploration games, whether *Metroid Prime* or *Super Mario Sunshine*, need to concern themselves with the possibility that players can get hopelessly stuck in the 3D world. Often this style of game provides pits or chasms that players can fall into without dying. It is vital to always provide ways out of these chasms, such as escape ladders or platforms that allow players to get back to their game. The method of getting out of the pit can be extremely difficult, which is fine, but it must at least be possible. What is the point of having players fall into a pit from which they cannot escape? If they are incapable of escape, the players' game-world surrogate needs to be killed by something in the pit, either instantly on impact (say the floor of the pit is electrified) or fairly soon (the pit is flooding with lava, which kills players within ten seconds of their falling in). Under no circumstances should the players be left alive, stuck in a situation from which they cannot continue on with their game.

One of the primary criticisms leveled against *Civilization*, an otherwise excellent game, is that its end-games can go on for too long. When two countries remain and one is hopelessly far behind the other, the game can tend to stretch on past the point of

Level designers for 3D action/adventure games, such as *Metroid Prime*, need to create maps that prevent the player from ever getting permanently stuck behind a piece of architecture.

interest while the dominant power tracks down and slaughters the opposition. Indeed, the less advanced country is not technically without hope. Players can still come from behind and win the game; it is not completely impossible. Players are not stuck to the same degree as players trapped in the pit with no exit, but the players are so far behind that it might as well be impossible; the luck they would need to have and the mistakes the dominant power would have to make are quite staggering. The solution to this is perhaps to allow the AI to figure out when it is hopelessly overpowered and surrender, just as players who are hopelessly far behind will do the same by quitting and starting a new game.

Players Expect to Do, Not to Watch

For a time the industry was very excited about the prospect of "interactive movies." During this period computer game cut-scenes got longer and longer. Slightly famous film actors started starring in the cut-scenes, and the budgets ballooned. Games became less and less interactive, less, in fact, like games. Then — surprise, surprise — gamers did not like these types of games. They failed to buy them. Companies collapsed, and everyone in the industry scratched their heads wondering what had gone wrong. Of course the gamers knew, and the game designers were soon able to figure out what was amiss. The problem was that players wanted to do; they did not want to watch. And they still feel the same way.

I am not completely against cut-scenes; they can be very useful tools for communicating a game's story, or for passing along to players information they will need in order to succeed at the next section of gameplay. That said, I do believe that cut-scenes should be stripped down and minimized to the absolute shortest length that is necessary to give some idea of the game's narrative, if any, and set up the next sequence of gameplay. Cut-scenes over one minute in length, especially those that fail to provide information essential for completing the next gameplay sequence, should be avoided. It does not matter if the cut-scene is text scrolling along the back of the screen, full-motion video with live actors, cel animation, or done using the game engine, the entirety of this break in the gameplay should not take longer than a minute. If there is

gameplay involved in some way, such as players planning out troop placement for the next mission, then it is not really a cut-scene and can be as long as is necessary. And certainly, if the cut-scene contains information critical to the gameplay, the designer will want to let the players replay the cut-scene as many times as they desire.

The quality of the cut-scene really does not matter either. There have been many games with the most atrocious "acting" ever witnessed, usually as performed by the assistant producer and the lead tester. There have been games with Hollywood-quality or better production and content. But in the end, if the game is any good, gamers are going to want to get back to playing and will skip the cut-scene.

In short, the reason people play games is because they want something different from what a movie, book, radio show, or comic can provide. They want to interact. I did not include among the reasons why people play games "because the library is closed" or "because the TV is on the blink." Gamers want a game, and game designers should give it to them.

Players Do Not Know What They Want, but They Know When It Is Missing

One of the biggest mistakes a designer can make at the start of development is to have a focus group with a bunch of gamers and ask them what they want to see in a new game. One could see this as an argument against focus groups, but that is not quite the point. Having playtesters is a very important part of game development. By playtesters, I mean people looking not for bugs in your game, but rather analyzing the gameplay and providing constructive feedback about it. A designer should have lots of people playing his game once it is at a stage in development where a majority of the gameplay can be judged. This may include using focus groups to obtain invaluable feedback about where the game is too challenging or confusing, but only once the game is ready for them to play.

On the other hand, having a focus group of gamers before a game has been created just to "bounce ideas around" is pretty much useless. Gamers are good, of course, at judging whether a game they are playing is any fun or not. They may not be able to explain in a useful way what exactly they like or dislike about a particular game, but they certainly know when they are having a good time, whether they are having their fantasies fulfilled, whether they are being appropriately challenged, or if a game gets them excited. When the game is failing to be any fun at all, gamers will be able to point that out to you but relatively few will be able to tell you what to do in order to fix the problem. Furthermore, just because gamers enjoy a wide range of finished games does not mean they are qualified to critique raw game ideas. Similarly, game ideas they come up with are not certain to be good ones. It is the rare person who can discuss the idea of a computer game and determine if is likely the final game will be fun or not. People with these skills are those best suited to become game designers. Not all game players have these skills, so when asked what sort of game they might be interested in playing, gamers may not really know what they want. But, as I say, they will be sure to tell you when it is missing from the final product.

A Never-Ending List

Of course, this exploration of what players want could fill an entire book. I encourage readers, whether aspiring game designers or those who have already had a number of games published, to create their own lists of what they think gamers want. Think of what frustrates you while you play a game and what parts of a given game give you the greatest satisfaction. Then try to determine why you react to a game mechanic as you do. What did it do right and what did it do wrong? This will allow you to establish your own list of rules, which you can then apply to your own designs. These rules will be part of what makes your games uniquely your own. Without feedback from playtesters it is often hard to determine whether your game is entertaining and compelling or not. But with a set of rules you can systematically apply to your design, you may be able to figure out whether anyone will like the completed game.