CHAPTER FOUR

The Experience Rises Out of a *Game*

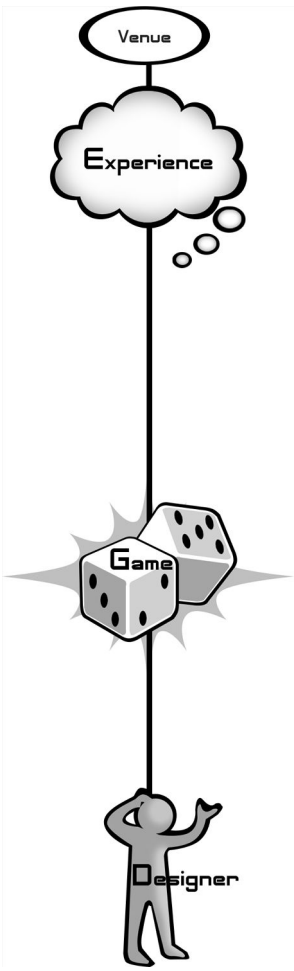

FIGURE
4.1

It is wonderful to talk about the design of experiences. Creating great experiences is indeed our goal. But we cannot touch experiences. We cannot manipulate them directly. What a game designer can control, can get his hands in, is the game. The game is your clay, and you will shape it and mold it to create all kinds of fabulous game experiences.

So what kind of games are we talking about? In this book, we mean all kinds of games: board games, card games, athletic games, playground games, party games, gambling games, puzzle games, arcade games, electronic games, computer games, videogames, and just about any other game that you might think of, for, as we'll see, the same principles of design apply to all of them. It is a little surprising that with such variety between these kinds of games, we recognize them all as one kind, that is, as different as they are, we intuitively recognize them all as games.

What is it that these things have in common? Or, to put it another way, how do we define "game"?

A Rant about Definitions

Before we continue, I want to be clear about why we should seek such a definition. Is it so that we know what we mean when we say "game"? No. For the most part, we all know what we are talking about when we say game. It is true that the idea of what game (or any term) means will vary a bit from person to person, but mostly, we all know what a game is. Sometimes, in a discussion, a debate may arise about whether something is "truly a game," forcing the discussion participants to clarify their own personal definition of what a game is, and once that is settled, the discussion moves on. There is nothing wrong with people having their own personal opinions about the proper definition of a game and what is or is not really a game, just as they may have similar opinions about what really is or not "music," "art," or "a sport."

Some people, mostly academics, do not hold this view. They view the lack of standardized definitions in the world of game design as "a crisis" that is holding back the art form. Usually, the people most concerned about this are the farthest removed from the actual design and development of games. So how do real-world designers and developers get by without a standardized vocabulary? Just like everyone else: when there is ambiguity, they simply explain what they mean. Does this sometimes slow down discussions and therefore the design process? Yes and no. Yes, it requires that at times, designers have to stop and explain what they mean, which can slow things down a little (and only a little). On the other hand, this pause for clarification often saves time in the long run, since after the pause, the designers are definitely each clear about what the other means.

Would it be best if there was some centralized dictionary of standard terms we could all refer to when discussing issues of game design? It would certainly be convenient, but it is far from necessary, and the fact that we don't have such a dictionary is far from a "barrier" or a "crisis." It is just a slight inconvenience, because it means we sometimes have to stop and think about what we mean and what we are trying to say. In fact, having to do this, in the long run, may make us better designers, not weaker ones, since we are forced to think just a little bit more. Further, such a dictionary would hardly be a gold standard for all time—as technologies change, they force us to reconsider some of our old definitions and terms, redefine some of them, and create new terms—so the process of definition and redefinition is likely to continue indefinitely or at least as long as there are advances in technology that are relevant to games.

Others say that the "real problem" with a lack of game design vocabulary is not a problem of standardized definitions, but a lack of terms, at all, to discuss some of the complex ideas that arise as part of the game design process. Therefore, they argue it is urgent that we try to put names on all these things. This is putting the cart before the horse, though, for the real problem we have is not a lack of words to describe elements of game design—the problem is a lack of clear thinking about what these ideas really are. As with many fields of design, game designers follow their gut instincts and feelings about what makes a good or a bad game and sometimes have difficulty articulating what exactly it is about a certain design that is good or bad—they just know it when they see it, so they are able to design great things. And you can certainly get by this way. What is important is to state clearly what you mean when you say a design is good or bad and how, specifically, it can improve. It is not a matter of knowing the vocabulary of game design—it is a matter of knowing the ideas of game design—what we call them matters little. Standardized terms for these things will evolve over time—this is not a process that can be rushed. The terms designers find useful will survive, the ones they don't will fall by the wayside.

That said, clear statements about important game design ideas, and terms to refer to them, are introduced all the time, and several are introduced in this book. These are not meant to be canonical definitions, but rather a clear expression of ideas that I hope you can use. If you have better ideas, or better terms, please use them instead—if your ideas and terms are indeed clear and strong, they will catch on and help other people more clearly think and express what they mean.

Some of the ideas we will have to deal with are necessarily murky. Terms like "experience," "play," and "game" are defined differently by different people, and considering that the ideas these terms represent do not have clear definitions even after the thousands of years we've been thinking and talking about them, it is unlikely they will be rigidly defined anytime soon.

Does this mean we should shy away from trying to define them? By no means. Defining things forces you to think about them clearly, concisely, and analytically. Having a list of terms and their definitions would teach you little. Embarking on the journey of trying to define these terms will teach you a great deal and strengthen your ability to think about design, even though the definitions you end up with may prove imperfect. For this reason, you may find this chapter offers you more questions than it does answers. But that's okay: the goal of this book is to make you a better designer, and a good designer must think.

So What Is a Game?

Now that we have discussed why we should define these things, let's give it a try, beginning with some things we can say for sure about games. Here's a start:

A game is something you play.

I don't think anyone will disagree with that. But it doesn't tell us very much. For example, is a game different than a toy? Yes. Games are more complex than toys and involve a different kind of play. We even use different languages:

A toy is something you play *with*.

Okay, interesting. Since toys are simpler than games, maybe we should try defining them first. Let's see if we can do better with our definition of toy. You can play with friends, and they aren't toys. Toys are objects.

A toy is an object you play with.

Well, that's something. But I might play with a roll of tape while I talk on the phone. Does that make it a toy? Technically, yes, but probably not a very good one. In fact, anything you play with could be classified as a toy. Perhaps it is a good idea for us to start considering what makes for a good toy. "Fun" is one word that comes to mind in conjunction with good toys. In fact, you might say:

A good toy is an object that is fun to play with.

Not bad. But what do we mean when we say "fun?" Do we simply mean pleasure, or enjoyment? Pleasure is part of fun, but is fun simply pleasure? There are lots of experiences that are pleasurable, for example, eating a sandwich or lying in the sun, but it would seem strange to call those experiences "fun." No, things that are fun have a special sparkle, a special excitement to them. Generally, fun things involve *surprises*. So a definition for fun might be:

Fun is pleasure with surprises.

Can that be right? Can it be that simple? It is strange how you can use a word your whole life and know for certain what it means, but not be able to express it clearly when asked. A good way to test definitions is to come up with counter-examples. Can you think of things that are fun, but not pleasurable, or fun, but don't involve some feeling of surprise? Conversely, can you think of things that are pleasurable and have surprises but aren't fun? Surprise and fun are such important parts of every game design that they become our next two lenses.

Lens #4: The Lens of Surprise

Surprise is so basic that we can easily forget about it. Use this lens to remind yourself to fill your game with interesting surprises. Ask yourself these questions:

- What will surprise players when they play my game?
- Does the story in my game have surprises? Do the game rules? Does the artwork? The technology?
- Do your rules give players ways to surprise each other?
- Do your rules give players ways to surprise themselves?

Surprise is a crucial part of all entertainment—it is at the root of humor, strategy, and problem solving. Our brains are hardwired to enjoy surprises. In an experiment where participants received sprays of sugar water or plain water into their mouths, the participants who received random sprays considered the experience much more pleasurable than participants who received the sprays according to a fixed pattern, even though the same amount of sugar was delivered. In other experiments, brain scans revealed that even during unpleasant surprises, the pleasure centers of the brain are triggered.

Lens #5: The Lens of Fun

Fun is desirable in nearly every game, although sometimes fun defies analysis. To maximize your game's fun, ask yourself these questions:

- What parts of my game are fun? Why?
- What parts need to be more fun?

So, back to toys. We say that a toy is an object you play with, and a good toy is an object that is fun to play with. But what do we mean by play? This is a tricky one. We all know what play is when we see it, but it is hard to express. Many people have tried for a solid definition of what play means, and most of them seem to have failed in one way or another. Let's consider a few.

Play is the aimless expenditure of exuberant energy.

—Friedrich Schiller

This is an expression of the outdated "surplus energy" theory of play that the purpose of play is to expend extra energy. Throughout the history of psychology,

there has been a tendency to oversimplify complex behaviors, and this is an early example of that. It also uses the word "aimless," as if play did not have goals, which it most certainly does. Surely we can do better than this.

> *Play refers to those activities which are accompanied by a state of comparative pleasure, exhilaration, power, and the feeling of self-initiative.*
>
> —J. Barnard Gilmore

That certainly covers some of the territory. Those are certainly things that are often associated with play. But it doesn't seem complete, somehow. Other things are also associated with play, like imagination, competition, and problem solving. At the same time, this definition is too broad. For example, an executive might work hard to land a contract and in doing so experience "comparative pleasure, exhilaration, power, and the feeling of self-initiative," but it would seem strange to call that an act of play. Let's try something else.

> *Play is free movement within a more rigid structure.*
>
> —Katie Salen and Eric Zimmerman

This unusual definition, from the book *Rules of Play*, is an attempt to create a definition of play so open that it can include things like "the play of the light along the wall" and "the play of a car's steering wheel." And while it is hard to find something we would call play that is not covered by this definition, one can easily come up with examples of what seem to be nonplay activities that do fit. For example, if a child is forced to scrub the kitchen floor, the child is enjoying (enjoying may be the wrong word) free movement (can slide the brush around freely) within a more rigid structure (the floor), but it would sound strange to classify this activity as play. Nonetheless, thinking about your game from the point of view of this definition can be interesting. Perhaps a different definition can better capture the spirit of play.

> *Play is whatever is done spontaneously and for its own sake.*
>
> —George Santayana

This one is interesting. First, let us consider spontaneity. Play is quite often spontaneous. When we talk about someone being "playful," that is part of what we mean. But is all play spontaneous? No. Someone might plan a softball game months in advance, for example, but when the game finally happens, it is still "play." So spontaneity is sometimes part of play, but not always. Some consider spontaneity so important to the definition of play that any attempt to dampen it renders an activity not play. Bernard Mergen states his view: "Games, competitive games, which have a winner or a loser, are not, in my definition, play." This viewpoint is so extreme as to seem ridiculous—by this logic, games (as we typically think of them) are not something you can play. This extreme aside, spontaneity does seem to be an important part of play.

But how about the second part of Santayana's definition: "done for its own sake"? By this, he seems to mean "we play because we like to." As trivial as it sounds, this is an important characteristic of play. If we don't like to do it, it probably isn't play. That is, an activity itself cannot be classified as a "work activity" or "play activity." Instead, what matters is one's attitude about the activity. As Mary Poppins tells us in the Sherman brothers' wonderful song, "A Spoonful of Sugar,"

In ev'ry job that must be done
There is an element of fun.
You find the fun and snap!
The job's a game.

But how do we find the fun? Consider the story that psychologist Mihaly Csikszentmihalyi (pronounced "Chick sent me high") relates about how factory worker Rico Medellin turns his job into a game:

> *The task he has to perform on each unit that passes in front of his station should take forty-three seconds to perform— the same exact operation almost six hundred times in a working day. Most people would grow tired of such work very soon. But Rico has been at this job for over five years, and he still enjoys it. The reason is that he approaches his task in the same way an Olympic athlete approaches his event: How can I beat my record?*

This shift in attitude turned Rico's job from work into play. How has it affected his job performance? "After five years, his best average for a day has been twenty-eight seconds per unit." And he still loves doing it: "'It's better than anything else,' Rico says. 'It's a whole lot better than watching TV.'"

What is going on here? How does simple goal setting suddenly redefine an activity we would normally classify as work into an activity that is clearly a kind of play? The answer seems to be a change in the reason he is doing the activity. He is no longer doing it for someone else; he is now doing it for his own personal reasons. Santayana actually elaborates on his definition, stating that upon further examination,

> *Work and play … become equivalent to servitude and freedom.*

When we work, we do it because we are obligated to. We work for food because we are slaves to our bellies. We work to pay the rent because we are slaves to our safety and comfort. Some of this servitude is willing servitude, such as willingness to earn money to care for our families, but it is servitude nonetheless. We are doing it because we have to, not because "we feel like it." The more obligated you are to do something, the more it feels like work. The less obligated you are to do something, the more it feels like play. Stated differently, "It is an invariable principle of all play … that whoever plays, plays freely. Whoever *must* play cannot *play*."

Building off of this, I'd like to share my own definition of play, which, though imperfect like these others, has its own interesting perspective. I often find when trying to define things about human activity, it can be useful to pay less attention

to the activity itself and more attention to the thoughts and feelings that motivate the activity. I can't help but notice that most play activities seem to be attempts to answer questions like the following:

- "What happens when I turn this knob?"
- "Can we beat this team?"
- "What can I make with this clay?"
- "How many times can I jump this rope?"
- "What happens when I finish this level?"

When you seek to answer questions freely, of your own volition, and not because you are obligated to, we say you are curious. But curiosity doesn't immediately imply you are going to play. No, play involves something else—play involves willful action, usually a willful action of touching or changing something—manipulating something, you might say. So one possible definition would be:

Play is manipulation that indulges curiosity.

When Rico tries to beat his assembly line goal, he is trying to answer the question: "Can I beat my record?" Suddenly, the reason for his activity is not to earn money to pay the rent, but instead to indulge his curiosity about a personal question.

This definition calls some things play that we might not ordinarily think of as play, such as an artist experimenting on canvas. On the other hand, he might say he is "playing with color." A chemist who tries an experiment to test a pet theory—is she playing? She might say she is "playing with an idea." This definition has flaws (can you find them?), but I do find it a useful perspective, and personally, it is my favorite definition of play. It also brings us to Lens #6.

Lens #6: The Lens of Curiosity

To use this lens, think about the player's true motivations—not just the goals your game has set forth but the reason the player wants to achieve those goals. Ask yourself these questions:

- What questions does my game put into the player's mind?
- What am I doing to make them care about these questions?
- What can I do to make them invent even more questions?

For example, a maze-finding videogame might have a time-limit goal such that at each level, players are trying to answer the question: "Can I find my way through this maze in 30 seconds?" A way to make them care more would be to play interesting animations when they solve each maze, so players might also ask the question: "I wonder what the next animation will be?"

No, Seriously, What Is a Game?

We've come up with some definitions for toys and fun and even made a good solid run at play. Let's try again to answer our original question: How should we define "game"?

Earlier we stated that "a game is something you play," which seems to be true, but isn't narrow enough. As with play, many people have tried to define "game." Let's look at a few of these.

> *Games are an exercise of voluntary control systems, in which there is a contest between powers, confined by rules in order to produce a disequilibrial outcome.*
>
> —Elliot Avedon and Brian Sutton-Smith

Wow. Very scientific! Let's pick it apart.

First, "an exercise of voluntary control systems": that is, like play, games are entered willfully.

Second, "a contest of powers": that does seem to be part of most games. Two or more things are striving for dominance. Some single-player games don't always feel this way (would you really call *Tetris* a contest of powers?), but this phrase gets across two things: games have goals, and games have conflict.

Third, "confined by rules": a very important point! Games have rules. Toys do not have rules. Rules are definitely one of the defining aspects of games.

Fourth, "a disequilibrial outcome": disequilibrial is an interesting word. It does not simply mean "unequal"; it instead implies that at one time, there was equilibrium, but that it was then lost. In other words, things started out even, but then somebody won. This is certainly true of most games—if you play, you either win or lose.

So this definition points out some key qualities important to games:

Q1. Games are entered willfully.

Q2. Games have goals.

Q3. Games have conflict.

Q4. Games have rules.

Q5. Games can be won and lost.

Let's consider another definition—this time, not from academia but from the world of design:

> *[A game is] an interactive structure of endogenous meaning that requires players to struggle toward a goal.*
>
> —Greg Costikyan

Some of this is pretty clear, but what in the world is "endogenous"? We'll get to that shortly. Let's take this one apart, like the last one.

First, "an interactive structure": Costikyan wants to make it very clear that the player is active, and not passive, and that the player and game interact with one another. This is definitely true of games—they have a structure (defined by the rules) with which you can interact and which can interact with you.

Second, "struggle toward a goal": again, we see the idea of a goal, and struggle implies some kind of conflict. But it implies more—it implies challenge. Partly, Costikyan seems to be trying to define not just what makes a game but what makes a good game. Bad games have little challenge or too much challenge. Good games have just the right amount.

Third, "endogenous meaning": endogenous is an excellent term that Costikyan brought from the world of biology to game design, and it means "caused by factors inside the organism or system," or "internally generated." So what is "endogenous meaning?" Costikyan is making the very important point that things that have value inside the game have value *only* inside the game. Monopoly money only has meaning in the context of the game of *Monopoly*. It is the game itself that gave it that meaning. When we play the game, the money is very important to us. Outside the game, it is completely unimportant. These ideas and terms are very useful to us, because they are often an excellent measure of how compelling a game really is. The game of roulette does not have to be played with real money—it can be played with tokens or play money. But the game, on its own, generates little endogenous value. People will only play it when real money is at stake, because it just isn't that compelling a game. The more compelling a game is, the greater the "endogenous value" that is created within the game. Some massively multiplayer role playing games have proved so compelling to people that imaginary game items are actually bought and sold for real money outside the game. Endogenous value is such a useful perspective that it becomes Lens #7.

Lens #7: The Lens of Endogenous Value

A game's success hinges on the players' willingness to pretend it is important. To use this lens, think about your players' feelings about items, objects, and scoring in your game. Ask yourself these questions:

- What is valuable to the players in my game?
- How can I make it more valuable to them?
- What is the relationship between value in the game and the players' motivations?

Remember, the value of the items and score in the game is a direct reflection of how much players care about succeeding in your game. By thinking about what the players really care about and why, you can often get insights about how your game can improve.

An example of the Lens of Endogenous Value: The game *Bubsy* for the SNES and Sega Genesis is a fairly standard platform game. You play a cat who tries to navigate to the end of levels, defeating enemies and avoiding obstacles and collecting yarn balls for extra points. However, the points serve no purpose other than to measure how many things you have collected. No other in-game reward is given for earning points. Most players gather yarn balls at first, with the expectation that they are valuable, but after playing a short while, they completely ignore them, focusing only on defeating enemies, avoiding obstacles, and getting to the end of the level. Why? Because the player's motivation (see Lens #6, *Curiosity*) is merely to complete the levels. A higher score doesn't help that, and thus the yarn balls have no endogenous value. Theoretically, a player who defeated all the levels might have a new motivation: defeat them again, but this time getting the highest score possible. In practice, the game itself was so difficult that the number of players who actually completed the game must have been small indeed.

Sonic the Hedgehog 2, for the Sega Genesis, was a similar platform game, but did not suffer from this problem. In *Sonic 2*, you collect rings instead of yarn balls, and the number of rings collected is very important to players—the rings have a lot of endogenous value. Why? Because carrying rings helps protect you from enemies, and every time you collect one hundred rings, you receive an extra life, which increases the chances you will be able to complete all the levels. In the end, *Sonic 2* was a much more compelling game than *Bubsy*, and one of the reasons was this mechanism, which clearly shows its importance through endogenous value.

Costikyan's definition gives us three new qualities that we can add to our list:

Q6. Games are interactive.

Q7. Games have challenge.

Q8. Games can create their own internal value.

Let's consider one more definition of game:

> *A game is a closed, formal system, that engages players in structured conflict, and resolves in an unequal outcome.*
>
> —Tracy Fullerton, Chris Swain, and Steven Hoffman

Most of this has been covered by the previous definitions, but there are two parts of this one I want to pick out:

First, "engages players": it is a good point that players find games to be engaging, that is, they make players feel "mentally immersed." Technically, we might argue this is a quality of good games, though not all games, but it is an important point.

Second, "a closed, formal system": this implies a lot of things. "System" means games are made of interrelated elements that work together. "Formal" is just a way of saying that the system is clearly defined, that is, it has rules. "Closed" is the interesting part here. It means that there are boundaries to the system. This hasn't

been mentioned explicitly yet in the other definitions, although the idea of endogenous value does imply it. Much has been made of this boundary at the edge of the game. Johan Huizinga called it "the magic circle," and it does indeed have a kind of magical feeling to it. When we are mentally "in the game," we have very different thoughts, feelings, and values than when we are "out of the game." How can games, which are nothing more than sets of rules, have this magical effect on us? To understand, we have to look to the human mind.

Let's review the list of game qualities we have picked out of these various definitions:

Q1. Games are entered willfully.

Q2. Games have goals.

Q3. Games have conflict.

Q4. Games have rules.

Q5. Games can be won and lost.

Q6. Games are interactive.

Q7. Games have challenge.

Q8. Games can create their own internal value.

Q9. Games engage players.

Q10. Games are closed, formal systems.

That's a lot, isn't it? Alan Kay, the computer researcher, once advised me: "If you've written a software subroutine that takes more than ten arguments, look again. You probably missed a few." This was his way of saying that if you need a long list to convey what you mean, you should find a better way to regroup your ideas. And indeed, this list of ten things does not seem complete. It is likely that we have missed a few.

It does seem odd that something as simple, compelling, and innate to us as the playing of games would require such an unwieldy definition. But maybe we're approaching this the wrong way. Instead of approaching the gameplay experience from the outside in, that is, focusing on how games relate to people, as we have been doing, perhaps we should look from the other direction: How do people relate to games?

What is it that people like so much about games? People give many answers to this question that are true for some but not all games: "I like playing with my friends," "I like the physical activity," "I like feeling immersed in another world," and many more. But there is one answer that people often give when they talk about playing games, which seems to apply to all games: "I like solving problems."

That's kind of weird, isn't it? Normally, we think of problems as something negative. But we really do get pleasure from solving them. And, as humans, we are really good at solving problems. Our big complex brains can solve problems better

than any of the other animals, and this is our primary advantage as a species. So it should not seem strange that it is something we enjoy. The enjoyment of problem solving seems to be an evolved survival mechanism. People who enjoy solving problems are going to solve more problems and probably get better at solving problems and be more likely to survive.

But is it really true that most games involve problem solving? One is hard pressed to come up with a game that does not. Any game with a goal effectively has presented you with a problem to solve. Examples might be:

- Find a way to get more points than the other team.
- Find a way to get to the finish line before the other players.
- Find a way to complete this level.
- Find a way to destroy the other player before he destroys you.

Gambling games, at first, seem like a possible exception. Is someone playing craps really trying to solve a problem? Yes. The problem is how to take the right calculated risks and make as much money as possible. Another tricky example is a game where the outcome is completely random, such as the children's card game of War. In War, the two players each have a stack of playing cards. In unison, they each flip over the top card from their stack to see who has the higher card. The player with the higher card wins the round keeping both cards. In the case of a tie, more cards are flipped, and the winner gets a larger take. Play continues until one player has all the cards.

How could a game like that possibly involve any problem solving? The outcome is predetermined—the players make no choices; they just gradually reveal who the winner will be. Nonetheless, children play this game just as happily as any other and draw no special distinction about this game differing somehow from other games. This baffled me for some time, so I took the cultural anthropologist point of view. I played the game with some children and tried hard to remember what it felt like to be a child playing War. And the answer quickly became obvious. For children, it is a problem-solving game. The problem they are trying to solve is "can I control fate and win this game?" And they try all kinds of ways to do it. They hope, they plead to the fates, they flip over the cards in all kinds of crazy ways—all superstitious behaviors, experimented with in an attempt to win the game. Ultimately, they learn the lesson of War: you cannot control fate. They realize the problem is unsolvable, and at that point, it is no longer a game, just an activity, and they soon move on to games with new problems to solve.

Another possible objection one might raise is that not every activity associated with gameplaying is a problem-solving activity. Often, the things people enjoy most about games, such as social interaction or physical exercise, have nothing to do with problem solving. But while these other activities might improve a game, they are not essential to the game. When problem solving is removed from a game, it ceases to be a game and becomes just an activity.

So if all games involve some kind of problem solving and problem solving is one of the things that define us as a species, perhaps we should look more closely at the mental mechanisms we use for problem solving to see if they have anything to do with the properties of games.

Problem Solving 101

Let's consider what we do when we solve a problem and how it might relate to our numbered list of game qualities.

One of the first things we do is to state the problem we are trying to solve, that is, define a clear goal (Q2). Next, we frame the problem. We determine its boundaries and the nature of the problem space. We also determine what methods we are allowed to use to solve the problem; that is, we determine the rules of the problem (Q4). How we do this is kind of hard to describe. It is not a completely verbal process. It is almost as if our minds are equipped to set up an internal, minimized, simplified version of reality that only includes the necessary interrelationships needed to solve the problem. This is like a cleaner, smaller version of the real-world situation, which we can more easily consider and manipulate or interact with (Q6). In a sense, we are establishing a closed, formal system (Q10) with a goal. We then work to reach that goal, which is usually challenging (Q7), because it involves some kind of conflict (Q3). If we care about the problem, we quickly become engaged (Q9) in solving it. When we are occupied in doing so, we kind of forget about the real world, since we are focused on our internal problem space. Since this problem space is not the real world and just a simplified version of it and solving the problem is important to us, elements in the problem space quickly gain an internal importance, if they get us closer to our goal of solving the problem, and this importance does not need to be relevant outside the context of the problem (Q8). Eventually, we defeat the problem or are defeated by it, thus winning or losing (Q5).

Now we see the magic circle for what it really is: our internal problem-solving system. This does not make it any less magical. Somehow, our minds have the ability to create miniature realities based on the real world. These microrealities have so effectively distilled the essential elements of reality for a particular problem that manipulations of this internal world, and conclusions drawn from it, are valid and meaningful in the real world. We have little idea of how this really works—but it does work very, very well.

Could our definition of game possibly be this simple?

A game is a problem-solving activity.

That can't be right. It might be a true statement, but it is too broad. There are lots of problem-solving activities that are not play. Many of them feel more like work. Many of them ("How can we reduce the production costs of these widgets by 8%?") literally are work. But we've already determined that the difference between a play

activity and a work activity has nothing to do with the activity itself, but one's motivation for doing the activity. Astute readers will notice that only nine of our ten qualities were covered in our problem-solving analysis. A key quality "games are entered willfully" (Q1) was omitted. No, games cannot simply be problem-solving activities. One who plays them must also have that special, hard-to-define attitude that we consider essential to the nature of play. So a definition that nicely covers all ten qualities might be:

A game is a problem-solving activity, approached with a playful attitude.

This is a simple, elegant definition, which has the advantage of no fancy jargon. Whether you accept this definition or not, viewing your game as a problem to be solved is a useful perspective, and that perspective is Lens #8.

Lens #8: The Lens of Problem Solving

To use this lens, think about the problems your players must solve to succeed at your game, for every game has problems to solve. Ask yourself these questions:

- What problems does my game ask the player to solve?
- Are there hidden problems to solve that arise as part of gameplay?
- How can my game generate new problems so that players keep coming back?

The Fruits of Our Labor

So we have embarked on a long journey of defining our terms. Let's review what we came up with:

- Fun is pleasure with surprises.
- Play is manipulation that satisfies curiosity.
- A toy is an object you play with.
- A good toy is an object that is fun to play with.
- A game is a problem-solving activity, approached with a playful attitude.

So are these the keys to the secrets of the universe? No. They only have value if they give you some insight into how to make better games. If they do, great! If not, then we had best move on and find something that will. You might not even agree with these definitions—if that's the case, then good for you! It means you are

thinking. So keep thinking! See if you can come up with better examples than what I have here. The whole point of defining these terms is to gain new insights—it is the insights that are the fruits of our labors, not the definitions. Perhaps your new definitions will lead to new and better insights that can help us all. One thing I feel certain of:

> *The whole truth regarding play cannot be known until the whole truth regarding life itself is known.*
>
> —Lehman and Witty

So let's not dawdle here. We've spent enough time thinking about what a game is. Now let's go see what a game is made of.

Other Reading to Consider

***Man, Play, and Games* by Roger Callois**. This 1961 book has long been a favorite of academics who study games. Despite that, it is pleasing to read and contains a number of fascinating insights about the nature of gameplay.

***Finite and Infinite Games* by James P. Carse**. This brief but inspiring book is a fascinating philosophical statement about the relationship between games and life.

***Why We Play Games: Four Keys to Emotion without Story* by Nicole Lazzaro**. A provocative exploration into the dimensions of "fun."

***Rules of Play* by Katie Salen and Eric Zimmerman, Chapters 7 and 8**. These two chapters contain some very thoughtful consideration of the definition of a game.

***The Grasshopper: Games, Life, and Utopia* by Bernard Suits (pronounced "sweets")**. An incredibly thought-provoking philosophical examination of the nature of games. Suits' definition of "game" infuriates me, yet I have never been able to refute it.