CHAPTER SIXTEEN

Experiences Can Be Judged by Their *Interest Curves*

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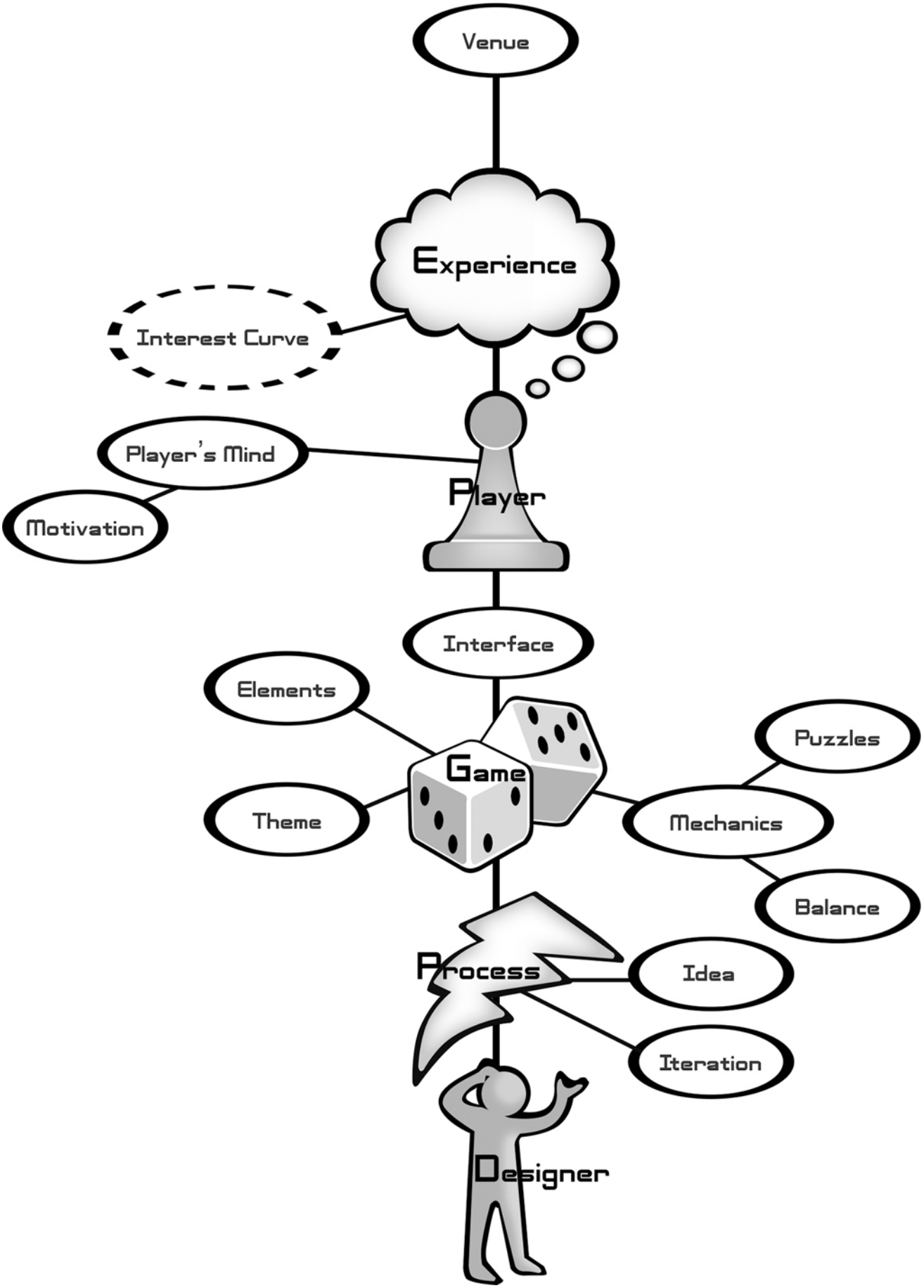
FIGURE
16.1



My First Lens

When I was sixteen, I landed my first job working as a professional entertainer. It was in a show troupe at a local amusement park. I had hopes of being a part of shows where I could make good use of my much-practiced juggling skills, but my job ended up being a mix of a lot of things—puppeteering, wearing a raccoon costume, working the mixing board backstage, and hosting audience participation comedy shows. But one day the head of the troupe, a magician named Mark Tripp, came to me, explaining, "Listen—that new stage on the east side of the park is almost finished. We're going to move the music revue over there, and I'm going to be putting on a magic show. On my days off, we need some other show to fill the gap. Do you think you and Tom could put together a juggling show?"

Naturally, I was very excited—Tom and I had been practicing together every chance we could get, hoping that we might get an opportunity to do our own show. We talked it over and put together a rough script, with brief descriptions of the various tricks we could do and the patter and jokes that would link them together. We practiced it until we felt it was ready for a trial run. In a couple of days, our big moment came, and we got to try the show in front of an audience. We opened with a balancing routine, followed by some ring juggling, then club juggling, then club passing, and ending with five ball juggling, which we felt was our hardest trick. It was exhilarating to be performing our very own show. At the end, we took our bows and went backstage triumphantly.

Mark was backstage waiting for us. "Well, what did you think?" we asked proudly.

"Not bad," he said, "but it could be a lot better."

"Better?" I said, surprised, "but we didn't drop anything!"

"True," he replied, "but were you listening to that audience?"

I thought back. "Well, they were a little slow to warm up, I guess, but they really liked the club passing routine!"

"Yes, but how about the five-ball juggling—your last routine?"

We had to admit that didn't go over as big as we thought it would.

"Let me see your script," he said. He read it over carefully, sometimes nodding, sometimes squinting at it. He thought for a moment and said, "You have some good stuff in this act, but the progression isn't quite right." Tom and I looked at each other.

"Progression?" I asked.

"Yeah," he responded, picking up a pencil, "See, your show right now is kind of shaped like this," and he sketched this shape on the back of the script:

FIGURE
16.2a

He went on. "Audiences generally prefer to see a show shaped more like this."

FIGURE
16.2b

“See?”

I didn’t see. But I had the feeling I was looking at something very important.

“It’s simple. You need to start with more of a bang—to get their attention. Then you back off and do something a little smaller, to give them a chance to relax and get to know you. Then you gradually build up with bigger and bigger routines, until you give them a grand finale that exceeds their expectations. If you put your ring routine first and your club passing routine last, I think you’ll have a much better show.”

The next day, we tried the show again, changing almost nothing but the order of the routines—and Mark was absolutely right. The audience was excited from the very beginning, and then their interest and excitement slowly built up over the course of the show to a grand climax with our club passing routine. Even though we dropped things a couple times in the second show, the audience response was twice what we had at the first show, with a few people jumping to their feet and shouting at the climax of the final routine.

Mark was waiting for us backstage, smiling this time. “It seems like it went better today,” he said. Tom replied, “After you suggested that we change the show, it seemed so obvious. It’s weird that we couldn’t see it on our own.”

“It’s not weird at all,” said Mark. “When you are working on a show, you are thinking about all the details and how one thing links to another. It requires a real change in perspective to rise above the show and look at it as a whole from the audience’s point of view. But it makes a real difference, huh?”

“It sure does!” I said, “I guess we have a lot to think about.”

“Well, don’t think about it now—you two have a puppet show in five minutes.”

Interest Curves

Since my time at the amusement park, I have found myself using this technique again and again when designing games and have always found it useful. But what are these graphs, really? Let’s take a moment and examine them in detail.

The first thing to realize is that any entertainment experience is a series of moments. Some are more powerful than others, and when we make these graphs, we are generally charting the most powerful moments. Back in my Imagineering days, when we would present a new idea for a theme park ride to the CEO of Disney, we could expect one certain question: “What are the top ten moments in your experience?” This question takes a lot of thought and preparation to answer properly, but if we didn’t have a clear answer, the pitch meeting was over. When you chart an interest curve, you are figuring out how to best arrange the best moments of your experience, and you can’t do that if you don’t know what they are. That’s what makes the Lens of Moments so important.

#68 The Lens of Moments

Memorable moments are stars that make up the constellation of your interest curve. To chart what is most important, ask yourself these questions:

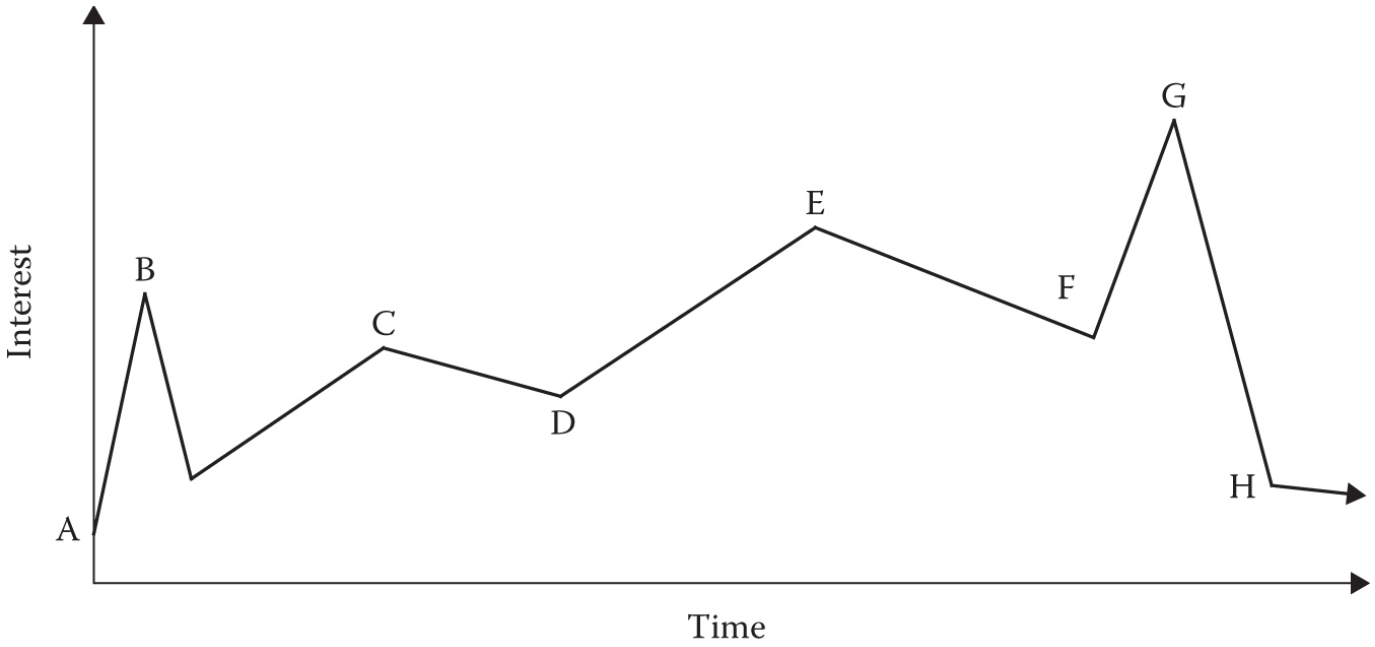
- What are the key moments in my game?
- How can I make each moment as powerful as possible?

Illustration by Kim Kiser

Once you know your moments, how should you chart them out? The quality of an entertainment experience can be measured by the extent to which its unfolding sequence of events is able to hold a guest's interest. I use the term "guest" instead of "player" because it is a term that works with games as well as more general experiences. The level of interest over the course of the experience can be plotted out in an interest curve. Figure 16.3 shows an example of an interest curve for a successful entertainment experience.

At point (A), the guest comes into the experience with some level of interest; otherwise, they probably wouldn't be there. This initial interest comes from preconceived expectations about how entertaining the experience will be. Depending on the type of experience, these expectations are influenced by the packaging, advertisements, advice from friends, etc. While we want this initial interest to be as high as possible to get guests in the door, overinflating it can actually make the overall experience less interesting.

FIGURE
16.3



Then the experience starts. Quickly we come to point (B), sometimes called “the hook.” This is something that really grabs you and gets you excited about the experience. In a musical, it is the opening number. In the Beatles song Revolution, it is the screaming guitar riff. In Hamlet, it is the appearance of the ghost. In a videogame, it often takes the form of a little movie before the game starts. Having a good hook is very important. It gives the guest a hint of what is to come and provides a nice interest spike, which will help sustain focus over the less interesting part where the experience is beginning to unfold and not much has happened yet.

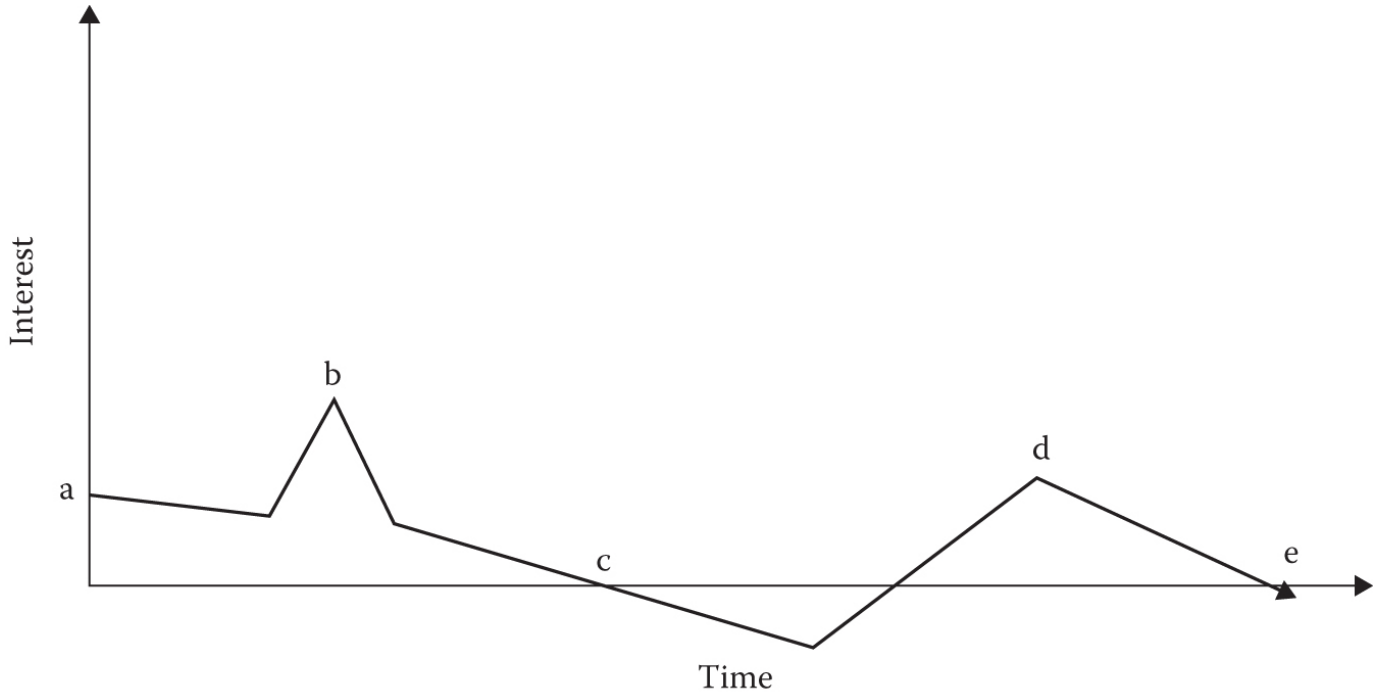
Once the hook is over, we settle down to business. If the experience is well crafted, the guest’s interest will continually rise, temporarily peaking at points like (C) and (E) and occasionally dropping down a bit to points like (D) and (F), only in anticipation of rising again.

Finally, at point (G), there is a climax of some kind, and by point (H), the story is resolved, the guest is satisfied, and the experience is over. Hopefully, the guest goes out with some interest left over, perhaps even more than when they came in. When show business veterans say “leave them wanting more,” this is what they are talking about.

Of course, not every good entertainment experience follows this exact curve. But most successful entertainment experiences will contain some of the elements that our picture of a good interest curve displays.

This diagram, on the other hand, shows an interest curve for a less successful entertainment experience. There are lots of possibilities for bad interest curves, but this one is particularly bad, although not as uncommon as one might hope.

FIGURE
16.4



As in our good curve, the guest comes in with some interest at point (a) but is immediately disappointed, and due to the lack of a decent hook, the guest's interest begins to wane.

Eventually, something somewhat interesting happens, which is good, but it doesn't last, peaking at point (b), and the guest's interest continues its downhill slide until it crosses, at point (c), the interest threshold. This is the point where the guest has become so disinterested in the experience that he changes the channel, leaves the theater, closes the book, or shuts off the game.

This dismal dullness doesn't continue forever, and something interesting does happen later at point (d), but it doesn't last, and instead of coming to a climax, the experience just peters out at point (e)—not that it matters, since the guest probably gave up on it some time ago.

Interest curves can be a very useful tool when creating an entertainment experience. By charting out the level of expected interest over the course of an experience, trouble spots often become clear and can be corrected. Further, when observing guests having the experience, it is useful to compare their level of observed interest to the level of interest that you, as an entertainer, anticipated they would have. Often, plotting different curves for different demographics is a useful exercise. Depending on your experience, it might be great for some groups but boring for others (e.g., "guy movies" vs. "chick flicks"), or it might be an experience with "something for everyone," meaning well-structured curves for several different demographic groups.

Patterns inside Patterns

Once you start thinking about games and entertainment experiences in terms of interest curves, you start seeing the pattern of the good interest curve everywhere. You can see it in the three-act structure of a Hollywood movie. You can see it in the structure of popular songs (musical intro, verse, chorus, verse, chorus, bridge, big finish). When Aristotle says that every tragedy has a complication and a denouement, you can see it there. When comedians talk about the "rule of three," you can see the interest curve. Anytime someone tells a story that is interesting, engaging, or funny, the structure is there, like in this "High Dive Horror" story, which was sent in by a girl to the "Embarrassing Moments" column of a teen magazine:

> *I was at an indoor pool, and my friends had dared me to jump off the highest diving board. I'm really afraid of heights, but I climbed all the way up anyway. I was looking down, trying to convince myself to*

jump, when my stomach just turned over and I barfed—right into the pool! Even worse, it fell on a group of cute guys! I climbed down as fast as I could and hid in the bathroom, but everyone knew what I'd done!

High Dive Horror, from Discovery Girls Magazine

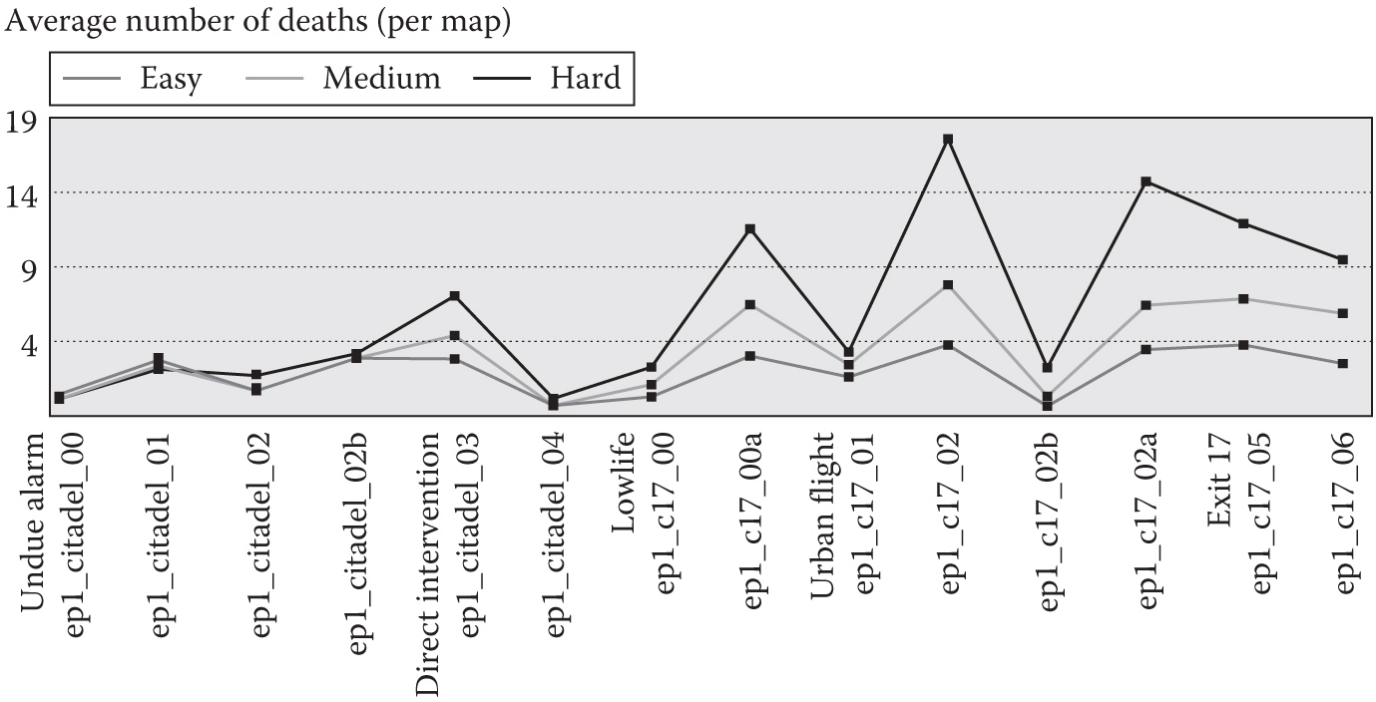
You can even see the pattern quite concretely in the layout of a roller coaster track. And naturally, this pattern shows up in games. The first time I found myself using it was when I was working on the Mark 2 version of *Aladdin's Magic Carpet* virtual reality experience for Disneyland. Some of us on the team had been discussing how, although the experience was a lot of fun, it seemed to drag a little bit at one point, and we were talking about how to improve that. It occurred to me that drawing an interest curve of the game would probably be a good idea. It had a shape roughly like this:

FIGURE
16.5

And suddenly it was very clear to me that the flat part was a real problem. How to fix it wasn't obvious. Simply putting more interesting moments in it might not be enough—since if the interest level was too high, it would diminish the interest of what was to come later. I finally realized that it might make the most sense to cut the flat part from the game entirely. Talking to the show director, he was opposed to cutting it—he felt we'd put too much work into it to cut it now, which was understandable because we were pretty late in development at this point. Instead, he suggested putting a shortcut at the beginning of the flat part so that some players could bypass that area if they wanted. We put the shortcut in (a merchant's tent you could fly into that magically transported you to the heart of the city), and it was clear that players who knew about it preferred to take it. Observing the game in use after installation, it was common to see the game operators watching the players progress on monitors suddenly lean down to a player and whisper in their ear "go in that tent!" When I first witnessed this, I asked the operator why she told them that, and she replied, "Well, I don't know … they just seem to have more fun when they go that way."

But the Magic Carpet experience was a brief one—only about five minutes long. It makes sense to ask whether this pattern is meaningful at all for longer experiences. Will what works for a five-minute experience still work for one that goes on for hours? As some evidence that it does, consider the game of *Half-Life 2*, one of the most critically acclaimed games of all time. Look at this graph of the number of player deaths that happen through a game of *Half-Life 2*, Episode 1, which has an average completion time of five hours and thirty-nine minutes.

FIGURE
16.6



(Courtesy 2008, Valve Corporation. Used with permission.)

The three lines indicate the three difficulty settings for the game. Do these shapes look familiar? It can certainly be argued that the number of times a player dies is a good indicator of challenge, which is connected to how interesting the experience is.

But what about even longer experiences like multiplayer games, where a player might play for hundreds of hours? How can the same pattern hold up for a five-hundred-hour experience? The answer is a little surprising: interest curve patterns can be fractal.

In other words, each long peak, upon closer examination, can have an internal structure that looks like the overall pattern, something like.

FIGURE
16.7

A fractal interest curve.

And of course, this can go as many layers deep as you like. Typical video games have this pattern in roughly three levels:

1. **Overall game**: Intro movie, followed by a series of levels of rising interest, ending with a major

climax where the player defeats the game.

2. **Each level**: New aesthetics or challenges engage the player at the start, and then the player is confronted with a series of challenges (battles, puzzles, etc.) that provide rising interest until the end of the level, which often ends with some kind of "boss battle."
3. **Each challenge**: Every challenge the player encounters hopefully has a good interest curve in itself, with an interesting introduction, and stepped rising challenges as you work your way through it.

Multiplayer games have to give the player an even larger structure, which we'll discuss further in Chapter 25: *Communities*.

Interest curves will prove to be one of the most useful and versatile tools you can use as a game designer, so let's add them to our toolbox.

#69 The Lens of the Interest Curve

Exactly what captivates the human mind often seems different for every person, but the most pleasurable patterns of that captivation are remarkably similar for everyone. To see how a player's interest in your experience changes over time, ask yourself these questions:

- If I draw an interest curve of my experience, how is it generally shaped?
- Does it have a hook?
- Does it have gradually rising interest, punctuated by periods of rest?
- Is there a grand finale, more interesting than everything else?
- What changes would give me a better interest curve?
- Is there a fractal structure to my interest curve? Should there be?
- Do my intuitions about the interest curve match the observed interest of the players? If I ask playtesters to draw an interest curve, what does it look like?

Illustration by Chris Daniel

Since all players are different, you may find it quite useful to use the Lens of the Interest Curve and Lens #19: *The Player*, at the same time, creating a unique interest curve for each of the types of players your game is trying to reach.

What Comprises Interest?

At this point, you might find your analytical left brain crying out, "I like these charts and graphs, but how can I objectively evaluate how interesting something is to another person? This all seems very touchy-feely!" And it is very touchy-feely. Many people ask what the "units of interest" are. And there is no good answer for that—we do not yet have a fun-o-meter that can give a reading in "millifuns." But that's okay, because all we care about are relative changes in interest—absolute interest is less important.

To determine the interest level, you have to experience it with your whole self, using your empathy and imagination and using skills of the right brain as well as the left. Still, your left brain may be happy to know that overall interest can be broken down further into other factors. There are many ways to do that, but I like to use these three:

Factor 1: Inherent Interest

Some events are simply more interesting than others. Generally, risk is more interesting than safety, fancy is more interesting than plain, and the unusual is more interesting than the ordinary. Dramatic change and the potential for dramatic change are always interesting. Accordingly, a story about a man wrestling an alligator is probably going to be more interesting than a story about a man eating a cheese sandwich. We

simply have internal drives that push us to be more interested in some things than others. Lens #6: *Curiosity*, comes in handy when evaluating inherent interest, but it is a useful enough concept that it gets its own lens.

#70 The Lens of Inherent Interest

Drama is anticipation mingled with uncertainty.

—William Archer

Some things are just interesting. Use this lens to be sure your game has inherently interesting qualities by asking these questions:

- What aspects of my game will capture the interest of a player immediately?
- Does my game let the player see or do something they have never seen or done before?
- What base instincts does my game appeal to? Can it appeal to more of them?
- What higher instincts does my game appeal to? Can it appeal to more of those?
- Does dramatic change and anticipation of dramatic change happen in my game? How can it be more dramatic?

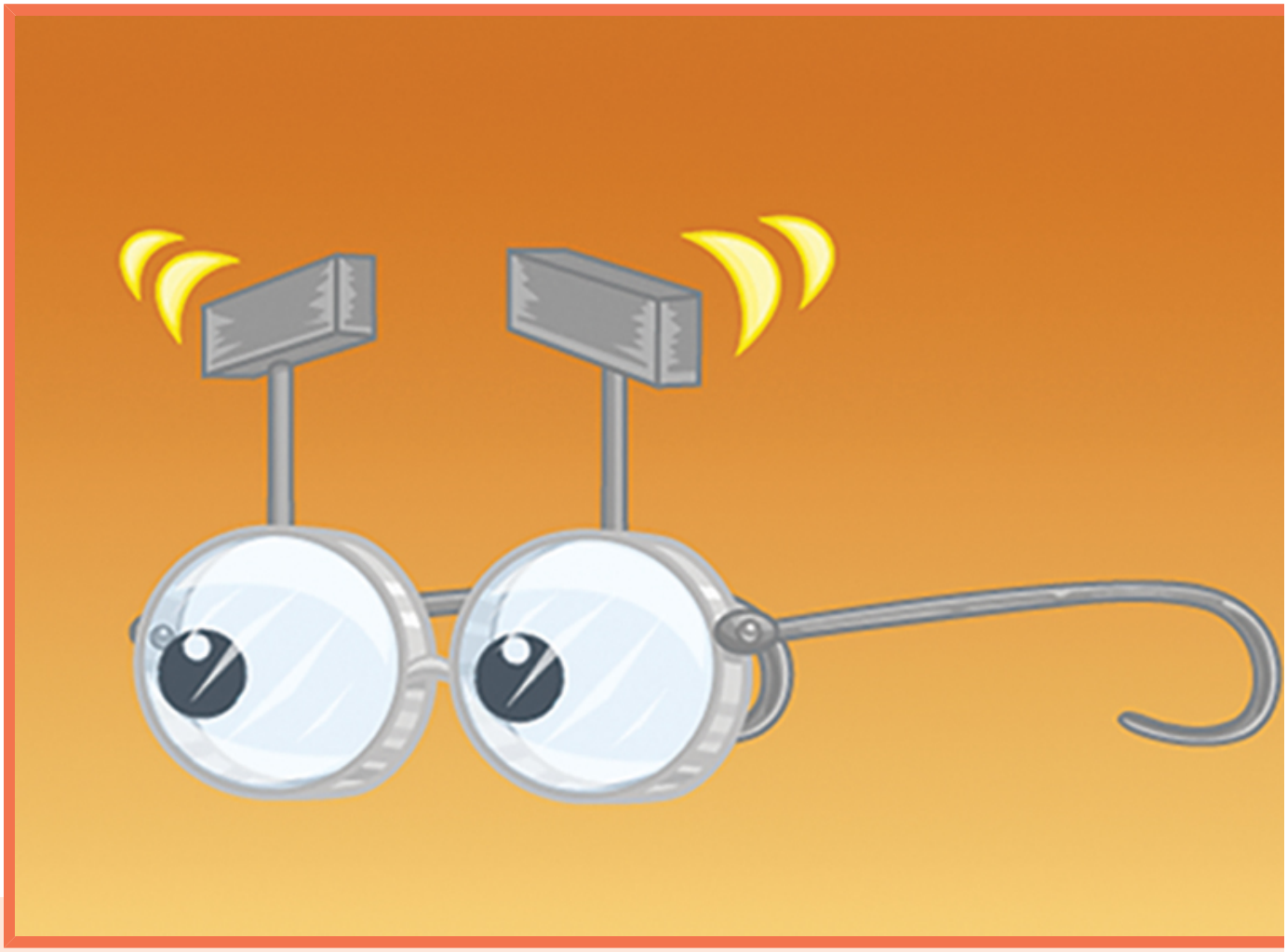


Illustration by Patrick Mittereder

The events don't stand alone, however. They build on one another, creating what is often called the story arc. Part of the inherent interest of events depends on how they relate to one another. For example, in

the story of Goldilocks and the Three Bears, most of the events in the story aren't very interesting: Goldilocks eats porridge, sits in chairs, and takes a nap. But these boring events make possible the more interesting part of the story where the bears discover their home has been disturbed.

Factor 2: Poetry of Presentation

This refers to the aesthetics of the entertainment experience. The more beautiful the artistry used in presenting the experience, whether that artistry be writing, music, dance, acting, comedy, cinematography, graphic design, or whatever, the more interesting and compelling the guests will find it. Of course, if you can give a beautiful presentation to something that is inherently interesting in the first place, all the better. We will discuss this further in Chapter 23: *Aesthetics*, but let's add this useful idea to our toolbox right now.

#71 The Lens of Beauty

Beauty is mysterious. Why, for example, do the most beautiful things have a touch of sadness about them? Use this lens to contemplate the mysteries of beauty in your game by asking yourself these questions:

- What elements make up my game? How can each one be more beautiful?
- Some things are not beautiful in themselves, but are beautiful in combination. How can the elements of my game be composed in a way that is poetic and beautiful?
- What does beauty mean within the context of my game?

Illustration by Kyle Gabler

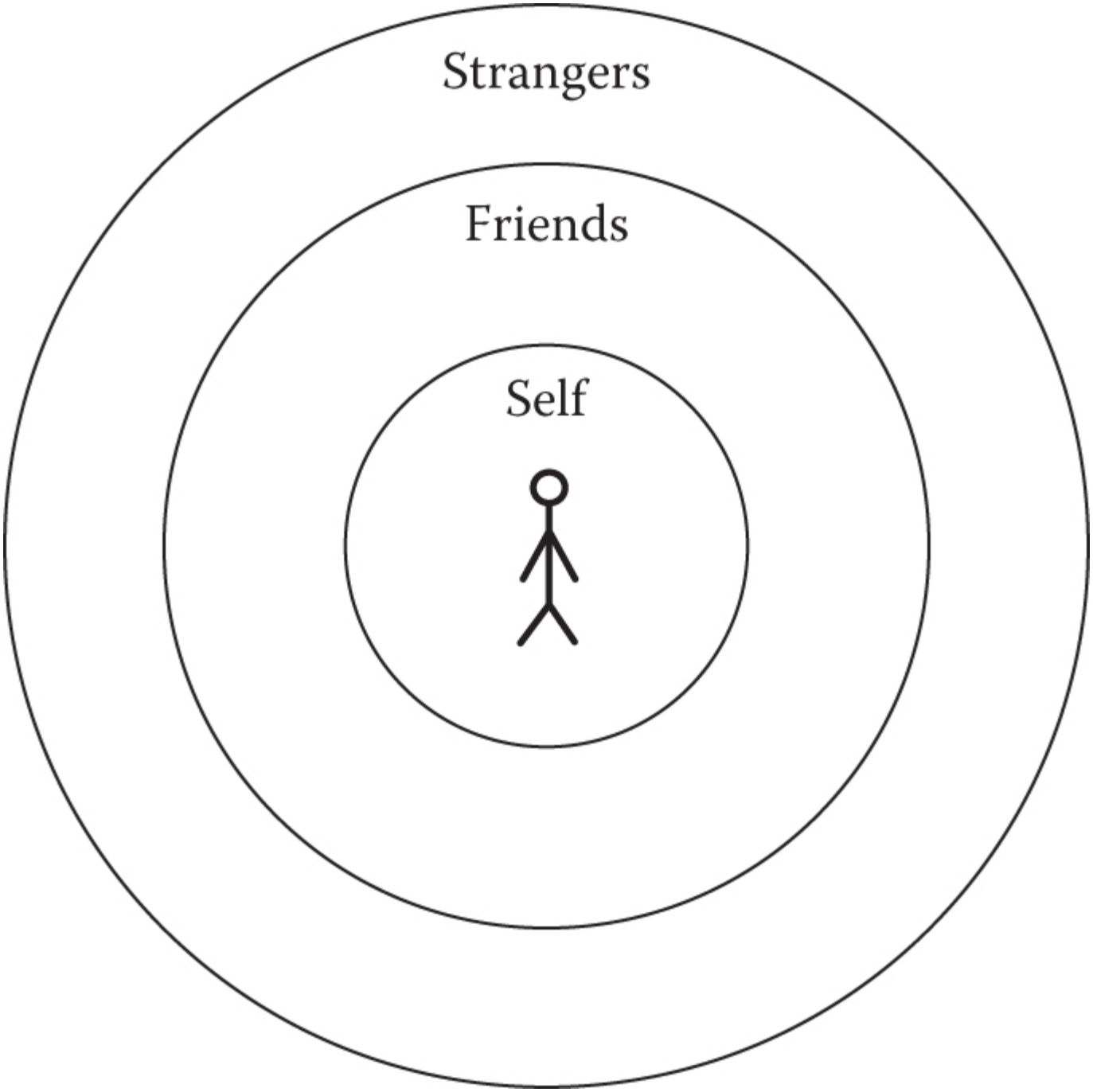
Factor 3: Projection

This is the extent to which you compel a guest to use their powers of empathy and imagination to put themselves into the experience. This factor is crucial to understanding the commonality between story and gameplay and requires some explanation.

Consider the example of winning the lottery (an inherently interesting event). If a stranger wins the lottery, you might be mildly interested in hearing about it. If one of your friends wins the lottery, that is somewhat more interesting. If you win the lottery, you will surely be interested enough to focus your attention on that fact. Events that happen to us are just more interesting than events that happen to other people.

You would think that this would put storytellers at a disadvantage, since the stories they tell are usually about someone else, often someone you have never heard of, or even someone who doesn't actually exist. However, storytellers know that guests have the power of empathy, the ability to put themselves in the place of another person. An important part of the art of storytelling is to create characters that the guests can empathize with easily, for the more the guests can empathize with the characters, the more interesting the events become that happen to those characters. When you start almost any entertainment experience, the characters in it are strangers. As you get to know them, they become like your friends and you begin to care about what happens to them, and your interest in events involving them grows. At some point, you might even mentally put yourself in their place, bringing you to the height of projection.

FIGURE
16.8



In terms of trying to build projection, imagination is as important as empathy. Humans exist in two worlds: the outward-facing world of perception and the inward-facing world of imagination. Every entertainment experience creates its own little world in the imagination. This world does not have to be realistic (although it might be), but it does need to be internally consistent. When the world is consistent and compelling, it fills the guest's imagination, and mentally, the guest enters the world. We often say that the guest is "immersed" in the world. This kind of immersion increases projection, boosting the overall interest of the guest significantly. The suspension of disbelief that keeps the guest immersed in the story world is fragile indeed. One small contradiction is all it takes to bring the guest back to reality and "take them out" of the experience.

Episodic forms of entertainment, such as soap operas, sitcoms, and serialized fiction, take advantage of the power of projection by creating characters and a world that persist from one entertainment experience to the next. Returning guests are already familiar with these persistent characters and settings, and each time they experience an episode, their projection grows, and the fantasy world becomes "more real." This episodic strategy can quickly backfire, however, if the creator fails to carefully maintain the integrity of the characters and the world. If new aspects of the world contradict previously established aspects or if the

regular characters start to do or say things that are “out of character” to serve the storyline of some new episode, then not only is the episode compromised, but the integrity of the entire fantasy world, which spans all episodes, past, present, and future. From the guest’s point of view, one bad episode can spoil the entire series, because the compromised characters and setting will seem phony from the point of contradiction onward and it will be difficult for the guest to sustain projection.

Another way to build up the player’s projection into the world you have created is to provide multiple ways to enter that world. Many people think of toys and games based on popular movies or television shows as nothing but a gimmicky way to make a few extra dollars by riding the coattails of a successful entertainment experience. But these toys and games provide new ways for children to access an established fantasy world. The toys let them spend more time in that world, and the longer they spend imagining they are in the fantasy world, the greater their projection into that world and the characters in it becomes. We will talk more about this idea in Chapter 19: *Worlds*.

Interactive entertainment has an even more remarkable advantage, in terms of projection. The guest can be the main character. The events actually happen to the guest and are all the more interesting for that reason. Also, unlike story-based entertainment, where the story world exists only in the guest’s imagination, interactive entertainment creates significant overlap between perception and imagination, allowing the guest to directly manipulate and change the story world. This is why videogames can present events with little inherent interest or poetry but still be compelling to guests. What they lack in inherent interest and poetry of presentation, they can often make up for in projection.

We will discuss projection further in Chapter 20: *Characters* when we talk about avatars, but let’s introduce a lens to examine it now.

#72 The Lens of Projection

One key indicator that someone is enjoying an experience is that they have projected their imaginations into it. When they do this, their enjoyment of the experience increases significantly, in a sort of virtuous circle. To examine whether your game is well suited to induce projection from your players, ask yourself these questions:

- What is there in my game that players can relate to? What else can I add?
- What is there in my game that will capture a player’s imagination? What else can I add?
- Are there places in the game that players have always wanted to visit?
- Does the player get to be a character they could imagine themselves to be?
- Are there other characters in the game that the players would be interested to meet (or to spy on)?
- Do the players get to do things that they would like to do in real life, but can’t?
- Is there an activity in the game that once a player starts doing, it is hard to stop?

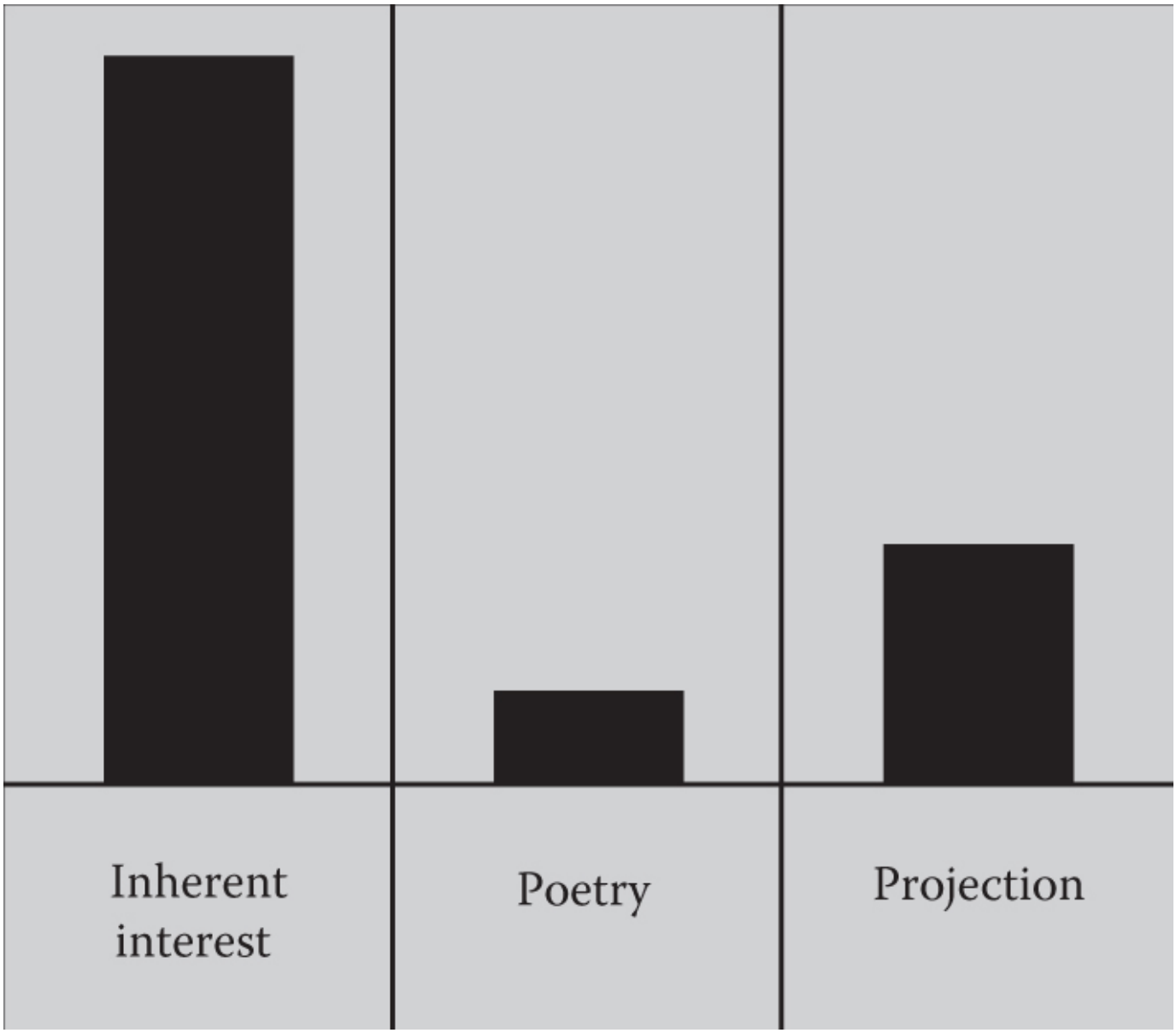
Illustration by Kyle Gabler

Interest Factor Examples

To ensure the relationship between the interest factors is clear, let’s compare some different entertainment experiences.

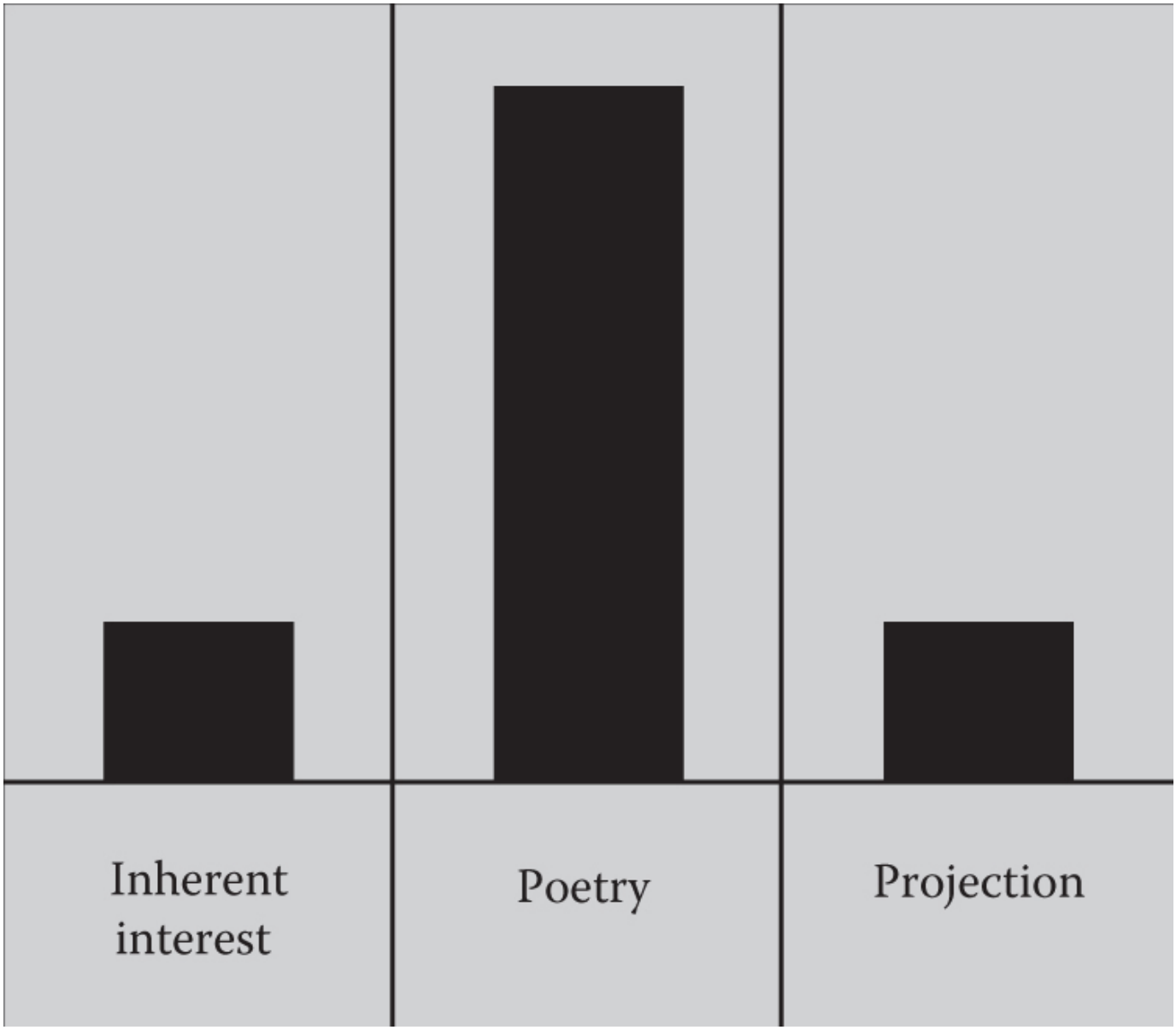
Some brave street performers attract attention by juggling running chainsaws. This is an inherently interesting event. It is hard not to at least look up when it is going on around you. The poetry with which it is presented, however, is usually somewhat limited. There is some projection, though, as it is easy to imagine what it would be like to catch the wrong end of a chainsaw. When you witness the act in person, the projection is even greater (see Figure 16.9).

FIGURE
16.9



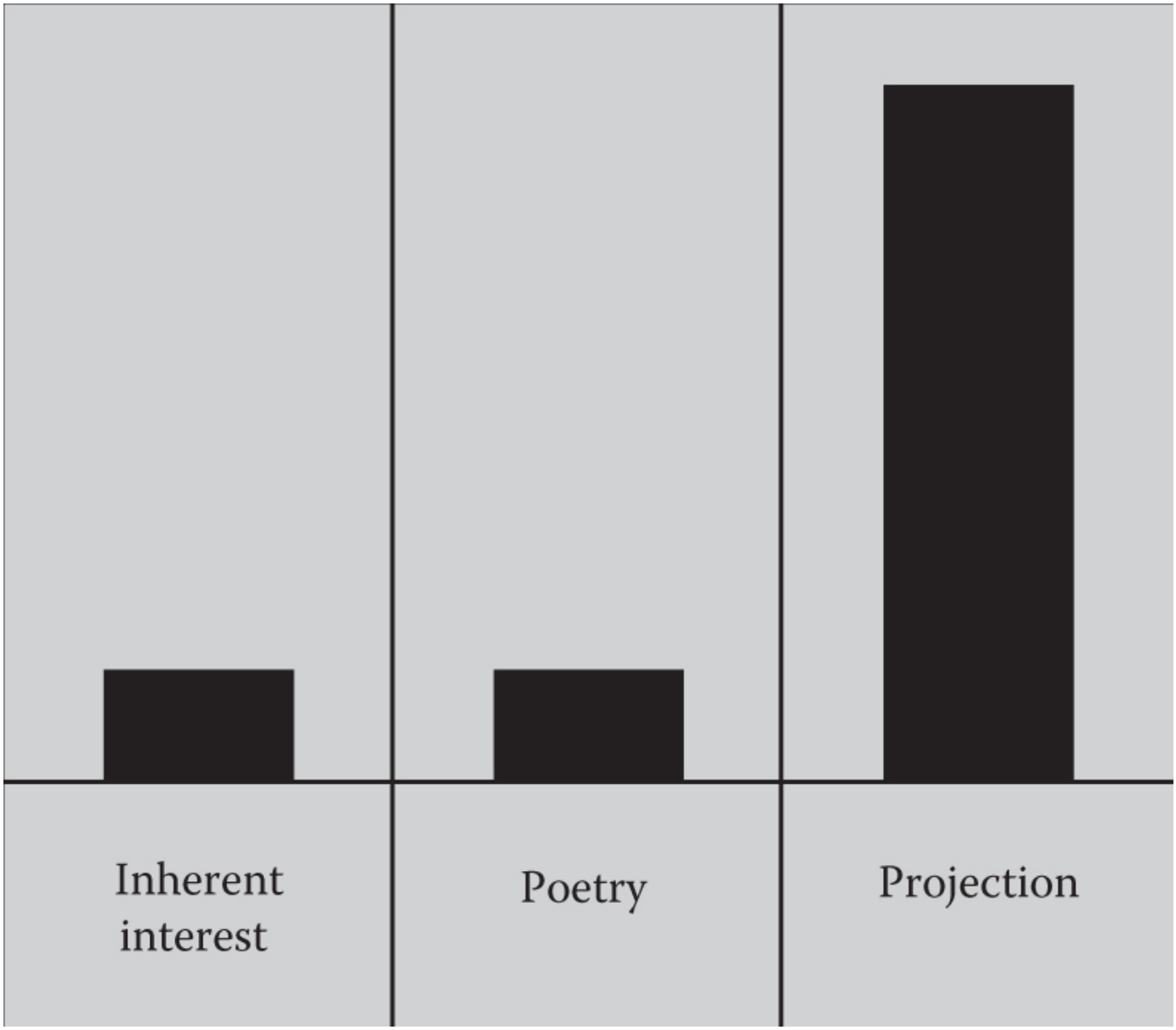
How about a violin concerto? The events (two sticks rubbed together) are not that inherently interesting, and the projection is usually not very notable. In this case, the poetry has to carry the experience. If the music isn't beautifully played, the performance will not be very interesting (see Figure 16.10). Now, there are exceptions. The inherent interest can build up when the music is well structured or when the evening's program is well structured. If the music makes you feel as if you are in another place or if you feel a particular empathy for the musician, there may be significant projection. But these are exceptions. In most cases, poetry alone is enough to sustain interest in beautiful music.

FIGURE
16.10



Consider the popular videogame Tetris. The game mainly consists of an endless sequence of falling blocks. This leaves little room for inherent interest or poetry of presentation; however, the projection can be intense. The guest makes all the decisions, and success or failure is completely contingent on the guest's performance. This is a shortcut that traditional storytelling is unable to take. In terms of an interesting entertainment experience, the large amount of projection makes up for what is lacking in poetry or inherent interest (see Figure 16.11).

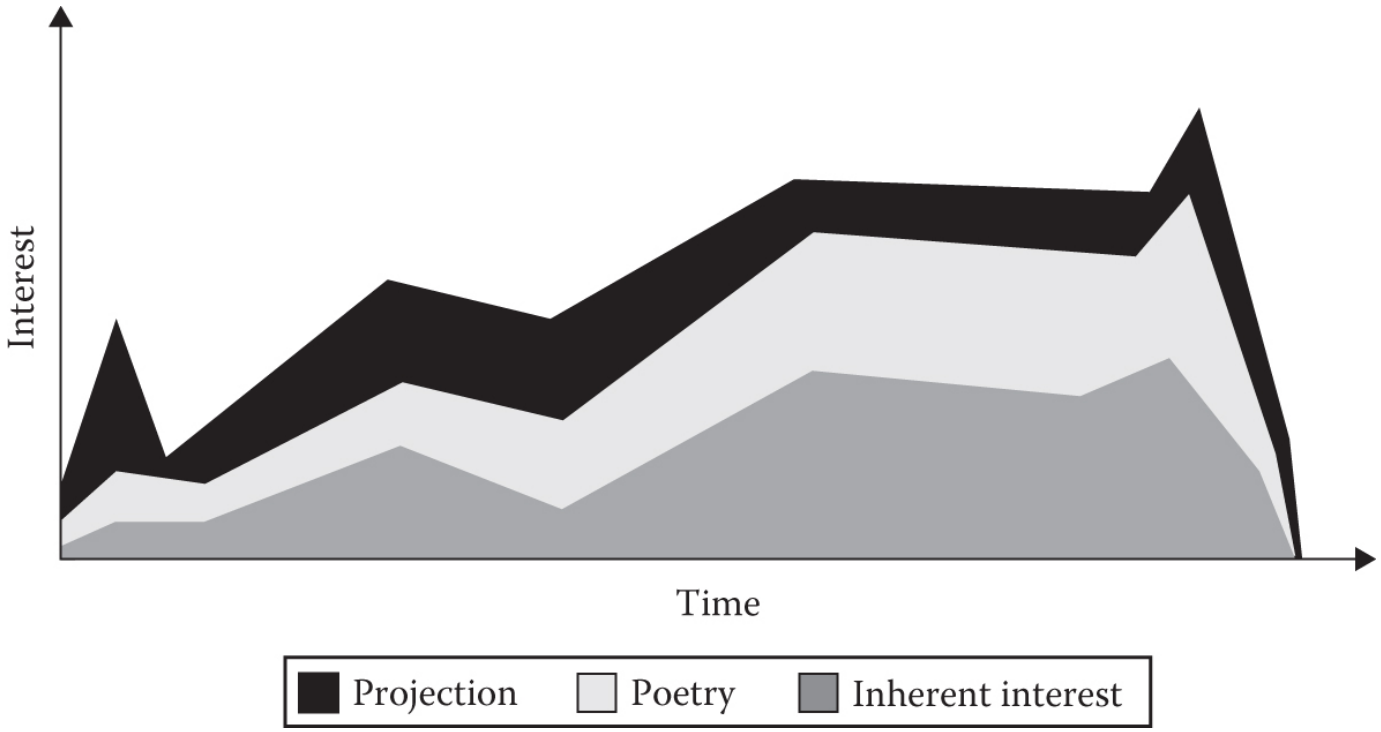
FIGURE
16.11



Putting It All Together

Some people find it useful to qualify the types of interest that happen at different points in their experience, letting you see which types of interest are holding the audience's interest at different times, creating graphs that look something like:

FIGURE
16.12



However you do it, examining the interest that a player has in a game is the best way to measure the quality of the experience you are creating. Opinions sometimes differ about what shapes are best for an interest curve, but if you don't take a step back and draw an interest curve of your experience, you risk not being able to see the forest for the trees. If you get in the habit of creating interest curves, though, you will have insights into design that others are likely to miss.

But a problem looms up before us. Games do not always follow the same pattern of experience. They are not linear. If that is true, then how can interest curves be of any use to us? To address that question properly, we must first spend some time discussing the most traditional type of linear entertainment experience.

Other Reading to Consider

***Magic and Showmanship* by Henning Nelms**. Remember the juggling show interest curve story at the start of this chapter? The day after that, Mark Tripp gave me a copy of this book that introduces the topic of interest curves. Anyone who ever has to stand on a stage should read this book.

CHAPTER SEVENTEEN

One Kind of Experience Is the *Story*

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FIGURE
17.1