

# Fundamentals

of Game Design Third Edition

Ernest Adams

Founder of the IGDA

New  
Riders

NRG

# FUNDAMENTALS of Game Design

THIRD EDITION

**Ernest Adams**

**New  
Riders**

The logo for New Riders, featuring the words "New" and "Riders" stacked vertically in a bold, sans-serif font. A curved line arches over the text, starting from the top left and ending at the bottom right.

## **FUNDAMENTALS OF GAME DESIGN, THIRD EDITION**

Ernest Adams

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ISBN-13: 978-0-321-92967-9

ISBN-10: 0-321-92967-5

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

*To Mary Ellen Foley, for love and wisdom.*

Omnia vincit amor.

“In this updated edition of *Fundamentals of Game Design*, Adams adds much to what was already a thorough look at game design in all its varieties. The result is a veritable feast of design lessons sure not only to satisfy the budding designer’s appetite, but also to refine her palate.”

—Ian Bogost, Georgia Institute of Technology

“*Fundamentals of Game Design* was already an essential book for designers. Adams provided a solid foundation for new designers to build on, by offering clear, pragmatic advice, exercises and wisdom to a subject often shrouded in mystery. This updated version is a must read for game designers of all levels of experience.”

—Adam Mayes, Subject Responsible for Game Design,  
University of Uppsala, Sweden

“Ernest writes in a way that is very down to earth and approachable to students. It is obvious that he has ‘been there and done that’ and his real-world, unpretentious approach to the material is what makes this text so accessible.”

—Andrew Phelps, Rochester Institute of Technology

## Acknowledgments

It would be a rare developer indeed who had worked on all the kinds of games addressed in this book, and certainly I cannot make that claim. When it came time to speak about subjects of which I had little direct experience, I relied heavily on the advice and wisdom of my professional colleagues. I owe particular gratitude to

Monty Clark	Mike Lopez	Michelle Hinn and the IGDA Accessibility Special Interest Group
Jesyca Durchin	Steve Meretzky	
Joseph Ganetakos	Carolyn Handler Miller	
Scott Kim	Brian Moriarty	
Rick Knowles	Tess Snider	
Raph Koster	Chris Taylor	

I owe special thanks to Jason VandenBerghe, Creative Director at UbiSoft, whose research on player motivation has been enormously valuable, and I'm grateful for his and UbiSoft's willingness to share it with the world. I hasten to add that any errors in the book are mine and not theirs.

I am also indebted to MobyGames ([www.mobygames.com](http://www.mobygames.com)) and Giant Bomb ([www.giantbomb.com](http://www.giantbomb.com)), whose vast databases of games I consulted daily, and sometimes hourly, in my research.

My technical editor, Tobi Saulnier, gave me advice and feedback about every aspect of the book. This is the second time Tobi has worked with me in this capacity, and her experience, especially with casual games and games for children, has been invaluable. A number of other colleagues offered useful suggestions about different parts of the manuscript; I am particularly grateful to Chris Bateman, Ben Cousins, Melissa Federoff, Ola Holmdahl, and Lucy Joyner for their advice.

Several people and institutions generously gave me permission to reproduce images:

MobyGames ([www.mobygames.com](http://www.mobygames.com))

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Cecropia, Inc.

Pseudo Interactive ([www.pseudointeractive.com](http://www.pseudointeractive.com))

Martin Stever

Finally, no list of acknowledgments would be complete without recognizing the help of my editor. Robyn Thomas worked hard with me to get the book done under severe deadline pressure (as always). Mary Ellen Foley, The Word Boffin ([www.wordboffin.com](http://www.wordboffin.com)), also provided occasional advice and staunch support. I'm grateful for the assistance of Margot Hutchison, my agent at Waterside Productions, in helping to finalize the contract.

Suggestions, corrections, and even complaints are always welcome; please send them to [ewadams@designersnotebook.com](mailto:ewadams@designersnotebook.com).

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Ernest Adams is a game design consultant and part-time professor at University of Uppsala Campus Gotland in Sweden. He lives in England and holds a Ph.D. in Computer Science from Teesside University for his contributions to the field of interactive storytelling. In addition to his consulting and teaching, he gives game design workshops and is a popular speaker at conferences and on college campuses. Dr. Adams has worked in the interactive entertainment industry since 1989, and he founded the International Game Developers' Association in 1994. He was most recently employed as a lead designer at Bullfrog Productions, and for several years before that he was the audio/video producer on the *Madden NFL* line of football games at Electronic Arts. In his early career, Dr. Adams was a software engineer, and he has developed games for machines from the IBM 360 mainframe to the present day. He is the author of five other books and the "Designer's Notebook" series of columns on the *Gamasutra* developers' webzine. His professional website is at [www.designersnotebook.com](http://www.designersnotebook.com).

## About the Technical Editor

Tobi Saulnier is founder and CEO of 1st Playable Productions, a game development studio that specializes in design and development of games tailored to specific audiences. Games developed by 1st Playable span numerous genres to appeal to play styles and preferences of each group and include games for young children, girls, middle schoolers, and young adults, and some that appeal to broad audiences. The studio also creates games for education. Before joining the game industry in 2000, Tobi managed R&D in embedded and distributed systems at General Electric Research and Development, where she also led initiatives in new product development, software quality, business strategy, and outsourcing. She earned her BS, MS, and Ph.D. in Electrical Engineering from Rensselaer Polytechnic Institute.

# CONTENTS

<b>Introduction</b> .....	<b>xii</b>
Whom Is This Book For? .....	xiii
How Is This Book Organized? .....	xiv
A Note on the Downloadable Files .....	xvii
<b>1 Games and Video Games</b> .....	<b>1</b>
What Is a Game? .....	1
Conventional Games Versus Video Games .....	12
Games for Entertainment .....	16
Serious Games .....	27
Summary .....	29
<b>2 Designing and Developing Games</b> .....	<b>31</b>
An Approach to the Task .....	31
Key Components of Video Games .....	37
The Structure of a Video Game .....	40
Stages of the Design Process .....	45
Game Design Team Roles .....	54
Game Design Documents .....	57
The Anatomy of a Game Designer .....	62
Summary .....	65
<b>3 The Major Genres</b> .....	<b>67</b>
What Is a Genre? .....	67
The Classic Game Genres .....	68
Summary .....	79
<b>4 Understanding Your Player</b> .....	<b>81</b>
VandenBerghe's Five Domains of Play .....	81
Demographic Categories .....	84
Gamer Dedication .....	96
The Dangers of Binary Thinking .....	98
Summary .....	101
<b>5 Understanding Your Machine</b> .....	<b>103</b>
Home Game Consoles .....	103
Personal Computers .....	106
Portable Devices .....	109
Other Devices .....	112
Summary .....	112

<b>6 Making Money from Your Game</b> .....	<b>113</b>
Direct Payment Models .....	113
Indirect Payment Models .....	117
World Markets .....	120
Summary .....	123
<b>7 Game Concepts</b> .....	<b>125</b>
Getting an Idea .....	125
From Idea to Game Concept .....	129
Summary .....	135
<b>8 Game Worlds</b> .....	<b>137</b>
What Is a Game World? .....	137
The Purposes of a Game World .....	138
The Dimensions of a Game World .....	139
Realism .....	162
Summary .....	163
<b>9 Creative and Expressive Play</b> .....	<b>167</b>
Self-Defining Play .....	167
Creative Play .....	171
Other Forms of Expression .....	176
Game Modifications .....	177
Summary .....	179
<b>10 Character Development</b> .....	<b>181</b>
The Goals of Character Design .....	181
The Relationship Between Player and Avatar .....	182
Visual Appearances .....	186
Character Depth .....	195
Audio Design .....	202
Summary .....	204
<b>11 Storytelling</b> .....	<b>207</b>
Why Put Stories in Games? .....	207
Key Concepts .....	210
The Storytelling Engine .....	219
Linear Stories .....	221
Nonlinear Stories .....	222
Granularity .....	232
Mechanisms for Advancing the Plot .....	233
Emotional Limits of Interactive Stories .....	235



Scripted Conversations and Dialogue Trees .....	237
When to Write the Story.....	246
Other Considerations .....	247
Summary .....	251
<b>12 Creating the User Experience .....</b>	<b>255</b>
What Is the User Interface? .....	255
Player-Centric Interface Design.....	257
The Design Process .....	263
Managing Complexity .....	267
Interaction Models .....	269
Camera Models.....	271
Visual Elements .....	280
Audio Elements .....	287
Input Devices .....	290
Navigation Mechanisms .....	300
Accessibility Issues.....	304
Allowing for Customization.....	308
Summary .....	309
<b>13 Gameplay.....</b>	<b>313</b>
Making Games Fun.....	313
The Hierarchy of Challenges .....	315
Skill, Stress, and Absolute Difficulty .....	321
Commonly Used Challenges .....	323
Actions .....	339
Saving the Game .....	343
Summary .....	348
<b>14 Core Mechanics .....</b>	<b>351</b>
What Are the Core Mechanics? .....	351
Key Concepts .....	358
The Internal Economy.....	366
Progression Mechanics.....	375
Tactical Maneuvering Mechanics .....	378
Social Interaction Mechanics.....	383
Core Mechanics and Gameplay .....	386
Core Mechanics Design.....	388
Random Numbers and the Bell-Shaped Curve.....	395
Summary .....	399

<b>15 Game Balancing</b> .....	<b>403</b>
What Is a Balanced Game? .....	403
Avoiding Dominant Strategies .....	405
Incorporating the Element of Chance .....	411
Making PvP Games Fair .....	412
Making PvE Games Fair .....	416
Managing Difficulty .....	418
Understanding Positive Feedback .....	429
Other Balance Considerations .....	433
Design to Make Tuning Easy .....	435
Summary .....	436
<b>16 General Principles of Level Design</b> .....	<b>439</b>
What Is Level Design? .....	439
Key Design Principles .....	440
Layouts .....	445
Expanding on the Principles of Level Design .....	450
The Level Design Process .....	457
Pitfalls of Level Design .....	465
Summary .....	469
<b>17 Design Issues for Online Gaming</b> .....	<b>471</b>
What Are Online Games? .....	471
Advantages of Online Games .....	471
Disadvantages of Online Games .....	473
Design Issues .....	476
Technical Security .....	482
Persistent Worlds .....	484
Social Problems .....	494
Summary .....	499
<b>Glossary</b> .....	<b>501</b>
<b>References</b> .....	<b>527</b>
<b>Index</b> .....	<b>533</b>

# INTRODUCTION

This is the third edition of *Fundamentals of Game Design*, a series of books that began ten years ago with *Andrew Rollings and Ernest Adams on Game Design*. This version has been updated and reorganized to reflect the latest changes to games, game technology, and even the gamers themselves.

Since the previous edition of *Fundamentals of Game Design*, the game industry has undergone a transformation more profound than any other in its history. The explosive growth of casual games, free-to-play games, and mobile gaming has challenged the traditional console and PC game publishing models. It is now easier than ever to build a video game thanks to middleware such as Unity and the many free tools for making art, animation, and audio. How we play has changed too. Most input devices have three-axis accelerometers to detect player movements, and the Kinect camera-based motion-capture device from Microsoft is just about to enter its second generation. (It was still called “Project Natal” in the previous edition of this book!)

In order to reflect all these changes, I have added four new chapters: Chapter 3, “The Major Genres,” a brief overview of game genres; Chapter 4, “Understanding Your Player,” which is about different kinds of players and their motivations and preferred play styles; Chapter 5, “Understanding Your Machine,” a general overview of the different game platforms and how players use them; and Chapter 6, “Making Money from Your Game,” which is about the various business models you can use to earn money as a game developer.

In order to make room for all this new material, the old Part Two from the second edition, which contained chapters about the individual game genres, has become a series of inexpensive e-books. The e-books are named *Fundamentals of <genre name> Design*, so the second edition’s Chapter 16, “Sports Games,” has been updated and now is an e-book called *Fundamentals of Sports Game Design*. I have also broken out shooter games and music games from action games as separate genres. All of these e-books are available from the Peachpit website at [www.peachpit.com/ernestadams](http://www.peachpit.com/ernestadams).

Two things set this book apart from its competitors: First, *Fundamentals of Game Design, Third Edition* is aimed squarely at designing complete, commercial video games. It’s not an esoteric book of theory, and it tries to cover the whole of the player’s experience, not just the gameplay or the mechanics. Second, it doesn’t contain a lot of interviews with famous designers. Interviews can spice up a book with entertaining anecdotes, but I prefer to use that space for practical advice to the working designer or design student.

*Fundamentals of Game Design* is entirely about game design. It does not cover programming, art, animation, music, audio engineering, or writing. Nor is it about project management, budgeting, scheduling, or producing. However, it does refer to all these things, because your design decisions will affect them all significantly. A budding game designer should learn something about all these subjects, and I encourage

you to consult other books to broaden your education as much as you can. All the greatest game designers are Renaissance men and women, interested in everything.

Most chapters end with two sections called “Design Practice Exercises” and “Design Practice Questions.” The exercises are intended for your instructor to assign to you (or for you to do on your own, if you’re not a student). The questions are ones that you should ask yourself about the game that you’re designing. Deciding on the answers to these questions is the essence of game design.

## Whom Is This Book For?

This book is aimed at anyone who is interested in designing video games but doesn’t know how to begin. More specifically, it is intended for university students and junior professionals in the game industry. Although it is a general, introductory text, more experienced professionals may find it a useful reference as well.

My only explicit prerequisite for reading the book is some knowledge of video games, especially the more famous ones. It would be impossible to write a book on game design for someone who has never played a game; I have to assume basic familiarity with video games and game hardware. For a thorough and deeply insightful history of video games, read Steven Poole’s *Trigger Happy: Videogames and the Entertainment Revolution* (Poole, 2004).

I do expect that you are able to write succinctly and unambiguously; this skill is an absolute requirement for a game designer, and many of the exercises are writing assignments. I also expect you to be familiar with basic high school algebra and probability; you’ll find this especially important when you study the chapters on core mechanics and game balancing.

The book assumes that you are designing an entire game by yourself. I have two reasons for taking this approach. First, to become a skilled game designer, you should be familiar with all aspects of design, so I cover the subject as if you will do it all. Second, even if you do have a team of designers, I cannot tell you how to structure or manage your team beyond a few generalities. The way you divide up their responsibilities will depend a great deal on the kind of game you are designing and the skills of the individuals on the team. From the standpoint of teaching the material, it is simplest to write it as if one person will do all the work.

## How Is This Book Organized?

*Fundamentals of Game Design, Third Edition* consists of 17 chapters, plus the companion e-books devoted to the individual genres (see [www.peachpit.com/ernestadams](http://www.peachpit.com/ernestadams) for more details). The first six chapters introduce games, game design, genres, players, machines, and business models for making money from games. The next ten chapters delve deeply into the different aspects of a game and how to design them:



**TIP** To get the most out of the book while you’re actually working on a game design, be sure to ask yourself the questions at the end of most chapters.

worlds, characters, mechanics, stories, the user experience, and many other issues. The final chapter addresses some of the special design considerations of online gaming.

## Chapter Overviews

Chapter 1 introduces games in general and video games in particular, including formal definitions of the terms *game* and *gameplay*. It also discusses what computers bring to games and lists the important ways that video games entertain.

Chapter 2 introduces the key components of a video game: the core mechanics, user interface, and storytelling engine. It also presents the concept of a gameplay mode and the structure of a video game. The last half of the chapter is devoted to the practice of game design, including my recommended approach, player-centric design.

Chapter 3 explains what game genres are and gives a brief introduction to the major genres of games.

Chapter 4 discusses players. It addresses the psychological traits that cause players to prefer different kinds of games. It also reviews key demographic categories—men and women, boys and girls—and looks at the phenomenon of gamer dedication.

Chapter 5 is about the different types of machines people play games on: home consoles, personal computers, and portable devices, and how designing and developing for these devices varies.

Chapter 6 examines the various business models by which you can make money from your game. These include traditional direct payment models such as retail sales and subscription-based games, and new indirect payment models such as free-mium and advertising-supported games.

Chapter 7 is about game concepts: where the idea for a game comes from and how to refine the idea. The audience and the target hardware (the machine the game will run on) both have a strong influence on the direction the game will take.

Chapter 8 speaks to the game's setting and world: the place where the gameplay happens and the way things work there. As the designer, you're the god of your world, and it's up to you to define its concepts of time and space, mechanics, and natural laws, as well as many other things: its logic, emotions, culture, and values.

Chapter 9 addresses creative and expressive play, listing different ways your game can support the players' creativity and self-expression.

Chapter 10 addresses character design, inventing the people or beings who populate your game world—especially the character who will represent the player there (his avatar), if there is one. Every successful entertainer from Homer onward has understood the importance of having an appealing protagonist.

Chapter 11 delves into the problems of storytelling and narrative, introducing the issues of linear, branching, and foldback story structures. It also discusses a number of related issues such as scripted conversations and episodic story structures.

Chapter 12 is about user experience design: the way the player experiences and interacts with the game world. A bad user interface can kill an otherwise brilliant game, so you must get this right.

Chapter 13 discusses gameplay, the heart of the player's mental experience of a game. The gameplay consists of the challenges the player faces and the actions he takes to overcome them. It also analyzes the nature of difficulty in gameplay.

Chapter 14 introduces the five types of core mechanics: physics, economics, tactical maneuvering, progression, and social interactions. It examines each of these (except physics) and looks in depth at internal economies. These govern the flow of resources (money, points, ammunition, or whatever) throughout the game.

Chapter 15 considers the issue of game balancing, the process of making multiplayer games fair to all players, and controlling the difficulty of single-player games.

Chapter 16 introduces the general principles of level design, both universal principles and genre-specific ones. It also considers a variety of level layouts and proposes a process for level design.

Chapter 17 looks at online gaming, which is not a genre but a technology. Online games enable people to play with, or against, each other in numbers from two up to hundreds of thousands. Playing against real people that you cannot see has enormous consequences for the game's design. The second half of the chapter addresses the particular problems of persistent worlds like *World of Warcraft*, and some of the social problems that can occur in online games that you will have to prepare for.

The Glossary defines many of the game design terms that appear in italics throughout the book.

## The Companion E-Books

As mentioned earlier in the introduction, the old Part Two from the second edition, which contained chapters about the individual game genres, has become a series of inexpensive e-books. All of these e-books are available from the Peachpit website at [www.peachpit.com/ernestadams](http://www.peachpit.com/ernestadams).

Two of these e-books are available for free with this book; the details of that are in the next section, "A Note on the Downloadable Files."

*Fundamentals of Shooter Game Design* discusses designing for this huge and specialized market. It examines both the frenetic deathmatch style of play and the stealthier, more tactical approach.

*Fundamentals of Action and Arcade Game Design* is about the earliest, and still most popular, genre of interactive entertainment: action games. This genre may be divided into numerous subgenres such as fighting games, platformers, and others, which the chapter addresses in as much detail as there is room for. It also looks at the most popular hybrid genre, the action-adventure.

*Fundamentals of Music, Dance, and Exercise Game Design* addresses a popular new genre that has made gaming more accessible to new players than conventional action games are.

*Fundamentals of Strategy Game Design* discusses another genre that has been part of gaming since the beginning: strategy games, both real-time and turn-based.

*Fundamentals of Role-Playing Game Design* is about role-playing games, a natural outgrowth of pencil and paper games such as *Dungeons & Dragons*.

*Fundamentals of Sports Game Design* looks at sports games, which have a number of peculiar design challenges. The actual contest itself is designed by others; the trick is to map human athletic activities onto a screen and control devices.

*Fundamentals of Vehicle Simulation Design* addresses vehicle simulations: cars, planes, boats, and other, more exotic modes of transportation such as tanks.

*Fundamentals of Construction and Simulation Game Design* is about construction and management simulations in which the player tries to build and maintain something—a city, a theme park, a planet—within the limitations of an economic system.

*Fundamentals of Adventure Game Design* explores adventure games, an old and unique genre of gaming that continues to earn a great deal of critical attention by its strong storytelling and its visual aesthetics.

*Fundamentals of Puzzle and Casual Game Design* examines puzzle games and casual games in general.

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## Understanding Your Player

The player-centric approach that this book teaches demands, above all else, that you understand your player, not merely as part of an audience of consumers, but as an individual who has an emotional connection to your game and, indirectly, to you. We often think that we know what players want from games, but much of this knowledge is intuitive and based on what *we* want from games as players. In this chapter, you'll learn about the characteristics of certain kinds of players. We'll begin with a way of looking at what kinds of feelings different players like to experience as they play. Next we'll examine several familiar demographics: men and women, boys and girls, dedicated ("hardcore") players, and casual ones. All this information will help you define what kinds of people you want to entertain and, in consequence, what kind of game you should build to entertain them.

### VandenBerghe's Five Domains of Play

Jason VandenBerghe is a Creative Director at Ubisoft, and he has been studying issues of player motivation for several years. In his lecture "The 5 Domains of Play: Applying Psychology's Big 5 Motivation Domains to Games," delivered at the 2012 Game Developers' Conference (VandenBerghe, 2012), VandenBerghe proposed a way of understanding different kinds of players and why they choose the games that they do. You can apply this as part of the player-centric approach to game design by thinking about your representative player in these terms. In the next few sections we'll take a look at VandenBerghe's five domains of play.

### The Five-Factor Model

VandenBerghe's work is based on a well-known psychological model of human personality traits called the Five Factor Model. This concept, also known as "The Big Five," explains personality traits in terms of five nonoverlapping domains: *openness to new experiences*, *conscientiousness*, *extraversion*, *agreeableness*, and *neuroticism* (which is defined as a tendency to experience negative emotions). The names of these traits produce a convenient acronym: OCEAN.



**NOTE** This is only a brief introduction to the subject of personality modeling. There are many books and scholarly articles available if you want to study it more closely. The book *Personality Traits*, by Gerald Matthews et al. (Matthews, 2009), looks into the theory of personality traits and the history of efforts to define them, including The Big Five.

The opposite ends of these scales are resistance to new experiences, lack of conscientiousness, introversion, disagreeableness, and stability. After thousands of surveys, the model has proven to be remarkably stable across ages and cultures.

These traits produce observable patterns of motivation and behavior: People who are open to new experiences seek them out; people who are agreeable seek social harmony; and so on. Based on his understanding of the Five Factor Model, VandenBerghe proposed that we play games to satisfy the same motivations that we feel in real life, and this is particularly true if we are unable to satisfy them in real life. Play gives us an outlet.

## The Five Domains of Play

VandenBerghe correlated the five traits of the Five Factor Model with five domains of play that might fulfill them—which can also be thought of as aspects of a game that players might be motivated to seek out. Here are his five domains of play and what they mean for understanding a player.

- **Novelty.** This correlates with the first trait, openness to experience. Players who seek novelty like games that include a lot of variety and unexpected elements. People who don't like novelty seek familiarity instead: games that offer them a comforting sameness. These players might prefer *Words with Friends* to a science fiction extravaganza set in a strange world with strange rules.
- **Challenge.** VandenBerghe correlates a desire for challenge—and perhaps more specifically effort and control—with the trait of conscientiousness. High-challenge players prefer games that are difficult and require precision to win. Their conscientiousness drives them to act, to accomplish things, and perhaps to try to complete everything in a game. Low-challenge players like sandbox games and others in which the player is free to fool around without being required to achieve something.
- **Stimulation.** Particularly via social engagement, this naturally correlates with extraversion. These players enjoy party games and others that involve interacting with other players. Those who prefer to avoid stimulation prefer games they can play alone, games that let them be the only real person in the game world.
- **Harmony.** Chapter 1, “Games and Video Games,” described harmony as a quality of a game, the feeling that all parts of the game belong to a single, coherent whole. In this case, however, VandenBerghe is referring to *social* harmony and correlates this motivation with the personality trait of agreeableness. He sees cooperative games such as *Little Big Planet* as good examples of games that offer social harmony, and strictly competitive games, such as the *Street Fighter* series, as ones that offer this quality's opposite, conflict.
- **Threat.** This domain is the most peculiar one because players' reactions to it are the opposite of what you might expect. The game quality of threat (an element of danger, or frightening content—anything that is likely to generate unpleasant emotions) is popular with people who have high neuroticism scores in OCEAN tests.

In other words, people who have a tendency to experience negative emotions actually seek out those emotions. He includes players of the survival horror genre in this category.

In his talk at the Game Developers' Conference, VandenBerghe further subdivided each of these domains into six "facets." For example, threat is really composed of six other qualities of games: tension, provocation, gloom, humiliation, addiction, and danger. However, there isn't room to discuss all 30 facets of games here. To learn more about them, please download his slides at [www.darklorde.com/2012/03/the-5-domains-of-play-slides](http://www.darklorde.com/2012/03/the-5-domains-of-play-slides).

Bear in mind that these are not binary, on-off qualities. They are continuums, sliding scales. What's more, they don't describe what players *always* like; our moods change. Sometimes we might want high-energy action, and at other times we might like a slower-moving adventure game with lots to look at.

VandenBerghe's point, and mine, is that by keeping these qualities of games in mind—these domains of play that people seek out—we can decide as designers how we want to entertain them: what experiences our games will provide.

## Another Domain: Attitudes to Storytelling

One question that VandenBerghe didn't address, but that makes a big difference among players, is how they feel about stories in games. Some are dogmatically opposed to the inclusion of story-like material in a game. They dislike any narrative content such as cut-scenes, and they think of the game primarily as a system of rules that they must learn to master. The story merely interferes with their enjoyment of this process. These players prefer tactical or strategic immersion in the game (as we explained in the section called "Immersion" in Chapter 1). They have no interest in narrative immersion. To them, the non-player characters (NPCs) in the game are not people to be interacted with but symbols to be manipulated. These players prefer games of pure action or strategy, or multiplayer games that make no effort to tell a story because the main point of the game is to interact with the other players. Some genres are more suited to storytelling than others, too. Sports games, for example, gain little from the inclusion of storytelling.

For other players, the story is not only part of the game, it is the main reason for playing the game. They believe in its characters and are concerned about what happens to them. The events in the game are a part of a plot to which they are contributing as active participants. They may even care less about the gameplay than they do about the story, using cheats or walkthroughs to find out what happens without having to overcome all the challenges themselves.

Few players are this extreme, however. Most enjoy a certain amount of storytelling in a game, so long as it is coherent with the gameplay and doesn't slow them down. At the very least they find a little framing narrative to be useful in establishing context: setting the scene and explaining who the protagonist is, what she is trying to achieve, and why.

As you think about your plans for the game and your target audience, keep in mind that some audiences love stories passionately, some hate them utterly, and many like a dash of storytelling with their gameplay. Decide which audience you want to serve, then check out Chapter 11, “Storytelling,” which discusses how to include stories in games in detail.

## Demographic Categories

As we saw in the previous section, the kinds of experiences that players like to have vary considerably, which accounts for the wide variety of games there are in the world. There are also significant differences among players by age and sex. The next few sections will explore these different demographic categories.

### Men and Women

*But what if the player is female?*

—SHERI GRANER RAY, *GENDER INCLUSIVE GAME DESIGN*

Women represent a large portion of the gamer market, a fact that runs counter to many stereotypes about video games. Audience research shows that in the United States, more adult women (31 percent) than teenage boys (19 percent) play video games, a statistic that may surprise you (Entertainment Software Association, 2013).

Men and women don’t differ nearly as much as pop psychology would like us to believe. Few individuals conform completely to traditional stereotypes of masculinity and femininity, and men’s and women’s interests overlap considerably. In *Gender Blending: Confronting the Limits of Duality*, Holly Devor (Devor, 1989) quoted studies showing that as many as 50 percent of heterosexual women identified themselves as having been tomboys as children. Unfortunately, far too many game designers (and product designers in general) treat men and women as entirely different species with little in common.

### GENDER INCLUSIVENESS

To attract women players, you don’t have to make the game about stereotypically feminine interests such as fashion or shopping, any more than you have to make games about monster truck rallies to attract men. Rather, to make a game of interest to both sexes, you need to avoid including material that discourages one group or the other from playing. To make a game that both sexes will play, don’t build content that will limit the interest of, or offend, either sex.

The biggest turnoffs for women are usually:

- Hypersexualized female avatars and other characters.
- Repetitive, monotonous play.
- Play without a meaningful goal. Simply racking up the highest score isn't enough.
- The solitary nature of single-player play. If you're making a single-player game, there is nothing you can do about this; it's just something to be aware of.

A number of people in the game industry are working to encourage the creation of more large games with adventurous female protagonists (like Lara Croft or Jade from *Beyond Good and Evil*). These efforts have met with a rather noisy backlash from a minority of men who, for reasons of their own, don't want such games to exist. You may safely ignore them; their assertions that men won't play games with female protagonists are simply not true, and in any case, it's not necessary to cater to men to make a popular game. If a game is good, they'll play it.

## A FEW GENERALITIES

Having warned you not to treat men and women as polar opposites, this section offers a small number of generalities about how male and female play patterns tend to differ among Western men and women (the only group for which much research exists). These observations may not apply to women in Japan, China, Korea, or India—all important new markets for games.

- **Men and women like to learn differently.** Women generally like to know what will be expected of them before they proceed rather than be thrown into the deep end to sink or swim. The learn-by-dying approach of old arcade games—which still persists in many mobile games—is not popular with many female players. Be sure to include tutorial levels at the beginning to introduce the game to your player.
- **Men and women have different attitudes toward risk.** In a game, men are generally willing to experiment even if it means losing frequently. Women will often consolidate and preserve their achievements to avoid losing them again, even if a riskier strategy might reap larger rewards.
- **Women are more interested in people than things and like to socialize as part of their play experience.** This explains why online games are more successful than single-player games among female players: Online games allow the players to socialize. Facebook games, which encourage players to invite their friends to play, share resources, and compare achievements, have proven to be extremely popular with women even though generally they don't permit the same kind of multiplayer play that a persistent world does.
- **Men and women have different conflict resolution styles.** Women prefer that violence have a justification; fighting for its own sake is of little interest to them. They are not opposed to violence per se, but they like the violence to be given a



**NOTE** For further reading, check out *Gender Inclusive Game Design* by Sheri Graner Ray (Ray, 2003). She discusses these issues in considerable detail.



**NOTE** In the real world, women assume a large part of the responsibility for maintaining the social fabric, keeping people connected across families and communities. Social networks and even online video games have become part of how they do this.

context, such as a story. Women also like to use lateral thinking to find alternatives to brute-force approaches. Fighting games, war games, and shooters are more popular with men than they are with women. On the other hand, role-playing games (RPGs) *are* popular with women even though they include a lot of combat because the combat has a purpose and is part of a larger aim, not an end in itself.

- **Women enjoy mental challenges and finding elegant solutions to problems.** This is reflected by the popularity of puzzle games among women.
- **Women like to customize their avatars.** Men often treat their avatar characters as puppets rather than people, someone simply to be controlled for the sake of winning the game. Women tend to identify with their avatars more. A woman uses the avatar as a means of self-expression and likes to be able to make the avatar look like herself or a fantasy version of herself. (These attitudes vary somewhat by age and game genre, however. Male players can spend a great deal of time tweaking their characters in an RPG, because that's the point of the game.)
- **Men have more leisure time and money to spend on gaming.** Particularly as they grow into young adulthood, male players are likely to treat gaming as a serious hobby—or drop it altogether in favor of something else. Men are generally more willing to spend \$60 on a video game on the first day of its release than women are. The new casual business models (see Chapter 6, “Making Money from Your Game”) have proven to be enormously popular with women because they don't require the player to risk a lot of money up front, and permit them to pay for a game in small transactions. Men are also more likely to devote large blocks of time to gaming. Women's time tends to be more fractured, especially if they have children, and they are much more likely to play for half an hour to two hours than they are to play for five hours at a time. Some women will play just a much time per week as men do, just in smaller chunks. This is something to keep in mind if you make a game that has a long distance between the save points. Many social network games allow players to stop at any point without losing any progress.

### DESIGN RULE Women Are a Market, Not a Genre

Do not try to design a “women's game” simply by creating features that address these generalities. Rather, design an intrinsically interesting game and bear these issues in mind as you consider the effect that your design decisions will have on your potential customer base.

Again, remember that these are generalities. There are plenty of devoted female players who buy expensive console games, and there are plenty of male players who are parents of young children and have just enough time for an inexpensive puzzle game a couple of times a day. The main reason to be aware of these factors is not so that you can make a game “for women” or “for men,” but so that you will know whether your game is likely to attract large numbers of women or men—or to discourage them from playing.

## MALE AND FEMALE PLAYERS AND CHARACTERS

Early in the history of video games, some designers were concerned that male players (who used to make up the majority of the market) would be unwilling to play with female avatars: Men might find identifying with a female character somehow threatening. Lara Croft (**Figure 4.1**) demonstrated that this is not a problem, at least as long as the character is acting in a role that men are comfortable with. Lara engages in traditionally masculine activities, so men are happy to enter the game as Lara. They might be less comfortable with an avatar who engaged in more traditionally feminine activities.



**FIGURE 4.1**  
Lara Croft (seen here in *Tomb Raider: Underworld*) is adventurous but hypersexualized.

Women, of course, are expected to identify with male heroes routinely, a state of affairs predating computer games. Until recently, few books, movies, TV shows, or video games about adventurous activities featured female heroes, and they're still very much in the minority. Women justifiably get tired of playing male heroes, and they appreciate the opportunity to play as female characters. At the same time, however, women aren't that interested in playing male-fantasy characters like Rayne from the *BloodRayne* series; such characters are so extreme that it discourages identification with them. Heather from *Silent Hill 3* (Figure 4.2) provides a better example; she looks like a real woman, not a walking lingerie advertisement.

**FIGURE 4.2**  
Heather, from *Silent Hill 3*, looks like a real person.



**TIP** Many designers in the game industry are interested in creating new female adventure heroes to meet the demand from women who like to play AAA games but are tired of the same old male protagonists. For inspiring stories of real-life women, see the Facebook or Pinterest pages called *Heroic Women to Inspire Game Designers*.

In general, male players don't actually identify with their avatars as much as female players do. Men are more willing to take the default avatar provided by the game and happily run with it. Women tend to see an avatar as an extension of their own personalities and an opportunity for self-expression (or, in a game with a story, as a character to care about). One of the best things you can do to make your game more attractive to female players is to permit them to customize the avatar—to choose his or her clothes, accessories, and weapons (if any). RPGs, especially online ones, offer some of the most powerful customization features.

When possible, it's nice to give the player a choice of male or female avatars. This requires some care to do well, however. A woman is not just a man with a different body; to do it properly you should also rewrite the dialogue to make sure that when a female avatar speaks, she sounds like a woman speaking, not just a woman reading lines written for a man. Men and women have different communication styles.



## Boys and Girls

Video games for children differ from those for adults, just as books and television shows for them do. Nor is there one single type of game appropriate for children—their motor and cognitive skills change throughout childhood. Here are the commonly recognized age categories:

- Preschool and kindergarten (ages 3 to 6)
- Early elementary (ages 5 to 8)
- Upper elementary (ages 7 to 12, the tweens)
- Middle and high school (13 and up, the teens)
- Late teens to mid-20s. Although these people are no longer children, their brains are still developing.

Each of these groups has, on the whole, its own interests and abilities, reflecting that their brains and physiology are different than adults'. As with gender, any general guidelines here have plenty of individual exceptions. The key is to remember, as researchers Piaget and Montessori have illustrated, it is an error to see children as less skilled, less knowledgeable, mini-adults.

In western cultures children tend to aspire to adulthood and its privileges, and avoid anything made for an age group younger than themselves. As a general rule, entertainment made for children of a certain age group will actually feature characters older than the players. The opposite is true in other cultures, such as in Japan.

If you're planning to make games for children, consider the following issues.

- **Hand-eye coordination.** Young children's motor skills are poorly developed at first, while those of teenagers and twentysomethings are at their peak; these skills decrease again further into adulthood. You must be aware of these differences in hand-eye coordination skill and take them into account when designing for children.
- **Logic development.** Children enjoy puzzles just as adults do, but for younger children, the puzzles should reflect their development of logical reasoning, which comes to a peak between the ages of 6 and 7, depending on the child. A puzzle game aimed at this age or below can accommodate the range of abilities by offering several difficulty levels (which you should verify by play-testing). When such puzzles are compared to those for an adult, the number of elements involved must be fewer, and the chain of reasoning required must be shorter in order for the puzzle to provide the same amount of engagement for the child.
- **Systematic thinking.** Children start to develop systematic thinking between the ages of 12 and 14. Keep this in mind before you add complex systems to games aimed at ages younger than this. A simple systems optimization problem that you may find easy is something that a child this age is just beginning to explore.



**TIP** If you want to learn more about childhood development, study the work of psychologist Jean Piaget. His theories of cognitive development have been hugely influential on education and many other fields.

- **Immediate versus long-term goals.** Games for older players often require the player to go through many steps before she reaches a long-term objective. Children are more focused on the moment-to-moment process and game play, and appreciate feedback more frequently. You don't have to have a saccharine character say "Good job!" every single time they do something right, but the priority should be on the moment-to-moment experience and less on overarching goals.
  - **Visual design.** Young children don't have as much experience as adults do at filtering out irrelevant details, so keep the user interfaces in games for children simple and focused; make them deep rather than broad.
  - **Linguistic complexity.** Don't talk down to children, but use age-appropriate vocabulary and syntax. Long sentences full of words that they don't know turn off kids. Short sentences made up of carefully chosen words can still express quite sophisticated ideas; for an example, read Saint-Exupéry's *The Little Prince*.
  - **Experimentation.** Children have an endless capacity for experimenting, and they tend to want to jump in and try everything, which means they are clicking on everything they see. This allows you as a designer to focus on creating game worlds that reward this type of exploration.
  - **Reading.** Children, especially young ones, have a limited reading ability, and even well into their teens some prefer not to spend a lot of time reading. You can use voiceover narration for important information and count on children to use their imaginations to fill in many story details that you might need to explain to an adult.
  - **Appropriate content.** This tricky area actually has as much to do with what parents want for their children than what the children want for themselves. Children's entertainment needs to address children's concerns, whereas sexuality and high finance are not relevant to their world. This is one of the reasons the early Harry Potter books are so brilliant; they capture children's concerns perfectly. Kids easily identify with Harry's feelings of alienation, being misunderstood by his family, and his sense of latent but untapped promise. Even the emphasis on food in the early books is significant; for younger children, food is a major interest and a big part of their daily routine. A great way to remember themes of childhood is to read popular literature aimed at the age you are creating a game for.
- Carolyn Handler Miller, a longtime developer of entertainment for children, has devised a list of "Seven Kisses of Death," features that drive away children rather than appealing to them. The Kisses of Death are widely held misconceptions about what children like, generally founded on what adults *want* them to like.
- **Death Kiss #1: Kids love anything sweet.** Kids love *some* things that are sweet, some of the time, but not anything and not all the time. Think about the Warner Brothers cartoons: wisecracking Bugs Bunny; Sylvester the Cat's endless efforts to eat Tweety Bird; Wile E. Coyote's similarly endless efforts to kill the Roadrunner;



**NOTE** For further reading on the Kisses of Death, consult Carolyn Handler Miller's book *Digital Storytelling, Second Edition: A Creator's Guide to Interactive Entertainment* (Miller, 2008).

homicidal Yosemite Sam and rabbit-cidal Elmer Fudd. Kids love these cartoons—which actually include a sneaky moral about violence redounding upon the violent—but there’s nothing remotely sweet about them.

■ **Death Kiss #2: Give them what’s good for them.** Kids are forever being told what’s good for them. They’re made to eat food they don’t like; they’re made to go to school; they’re made to do chores, learn to play the piano, and a million other things supposedly meant to build their characters or strengthen their bodies or minds. Most of this is reasonable and necessary, but not in an entertainment context. How would you, as an adult, like to be fed a dose of propaganda with every book and TV show you saw? You wouldn’t, and neither do kids. When they want to relax and have fun, they don’t want a dose of medicine with it.

■ **Death Kiss #3: You’ve just got to amuse them.** This is the opposite of Death Kiss #2; it cynically assumes that kids are less discriminating than adults, so any old fluff will do. It won’t. Kids can’t tell the difference between good acting and bad acting, and they aren’t experienced enough to recognize clichéd plot lines, but they won’t put up with just anything. Walt Disney realized this, and so do the writers and animators who continue his work; Disney movies are multilayered even though they are for children. So, too, are the best children’s books. Meaningful content will keep a child’s attention longer than trivial content.

■ **Death Kiss #4: Always play it safe!** This is a variant of the “sweet” Death Kiss. Some people, in an effort to avoid violent or controversial content, go overboard and try to eliminate anything that might frighten or disturb a child or even raise her pulse. This inevitably results in bland, dull entertainment. Again, look at Disney films for good counter-examples: Dumbo’s separation from his mother; Snow White’s terrified flight through the forest; the outright murder of Simba’s father in *The Lion King*. These are not happy things, and that’s OK. Gerard Jones argues in his important treatment of the subject *Killing Monsters: Why Children Need Fantasy, Super Heroes, and Make-Believe Violence* (Jones, 2002) that learning to deal with threatening situations constitutes an important part of growing up.

■ **Death Kiss #5: All kids are created equal.** There’s no such thing as a single children’s market. Kids’ interests and abilities change too quickly to lump them all into a single category. If you’re planning to make a game for ages 6 to 10 and the publishers decide they want a game for ages 8 to 12, you’ll have to redesign the game. One-size-fits-all definitely doesn’t work with kids.

■ **Death Kiss #6: Explain everything.** Kids are much happier with trial-and-error than adults are, and they don’t want long introductions explaining how to play the game. They want to dive in and play. Above all, avoid talking heads with a lot of jabber. Adults naturally tend to assume that kids need things explained to them, but it’s not true of video game worlds in which they can’t hurt themselves or anything else. Keep exposition—and especially anything that smacks of teaching them—to a minimum.

■ **Death Kiss #7: Be sure your characters are wholesome!** Wholesome equals boring. We wouldn't put up with bland white-bread characters in our entertainment; why should we make children do so? You don't have to introduce serial killers, but create real characters with their own personal foibles. *Sesame Street* famously offered a variety of characters, many specifically designed to represent moods or attitudes familiar to young children: greedy, grouchy, helpful, and so on.

## Games for Girls

The game industry has always been overwhelmingly dominated by white men, and male developers have tended to design games that they themselves would like (or would have liked when they were boys). Whether for societal or genetic reasons, boys' and girls' interests diverge more widely from one another than men's and women's do; on their respective bell-shaped curves, the means are farther apart. At certain ages, many boys and girls may flatly reject things (clothing, toys, or other symbols) associated with the opposite sex.

For most of the game industry's history, no one made an effort to design games specifically for girls or even tried to think much about what kinds of games girls would like. It was a catch-22 situation: If you proposed a game for girls to a publisher, you would be met with the reply, "Girls don't play video games." But, of course, the reason girls didn't play video games was that there weren't many games they liked to play—or at least that was the general perception. (Further research showed that this was an unfounded stereotype; far more girls played games than people realized, even though no one was considering their interests.)

In the mid-1990s, a number of people realized that girls represented an untapped market, and several companies grew up to exploit it. Unfortunately, many of these early efforts were graphically poor and offered less value for the money than most other games. Girls want, and deserve, games just as good as those made for boys. More recently, several companies have started making games for girls again with more success. In the late 2000s the most notable was Ubisoft's *Imagine* series of games, inspired by the unexpected breakout success of *Imagine: Fashion Designer*. The subsequent series and its competitors covered a huge range of subjects as Ubisoft and other publishers sought to find out what this unexpected market wanted to play. Some of the most successful games are based on popular toy and book characters, some of which pre-date the *Imagine* era (for instance, Barbie, Bratz, and Nancy Drew), and all have earned huge success.

If you're interested in making games for this market, remember that the audience is *girls*, not women. Adult women are naturally more diverse than children and have a wider variety of interests. Don't assume that what applies to women also applies to girls generally.

## MATTEL'S APPROACH

If you want to make games specifically for girls, as opposed to games that appeal to children of both sexes, you have to ask yourself what especially interests girls—and, perhaps more important, what does *not* interest girls. One way to assess this is to examine what girl consumers buy, read, and watch. As an example, you need look no farther than Mattel, manufacturer of *Barbie*, the single most famous toy for girls in the world. Mattel's great success developing games for girls results from its understanding of its target market. (Mattel doesn't publish software itself anymore; instead, it licenses its brands to others.)

*Barbie's* success derives partly from the proven, time-tested formula she follows and partly from a well-targeted market: Mattel aims *Barbie* at a core age group from 4 to 8 years old. After that, girls' interests change, and Mattel does not try for a one-size-fits-all approach. The company has no social agenda and makes no claim of political correctness.

## JESYCA DURCHIN'S ADVICE

Jesyca Durchin owns the consulting company Nena Media ([www.nenamedia.com](http://www.nenamedia.com)), which creates media content for young girls, and she is a former executive producer for Mattel. At the 2000 Game Developers' Conference, she gave an extremely useful summary (Durchin, 2000) of what she had learned about how girls in this age group play games.

### Girls Have a Wide Variety of Interests

It is vital to identify what type of girl is interested in your type of game. Girls are much more fragmented in their interests than boys. Girls change more rapidly, and their emotional and intellectual growth happens differently. A girl has different needs in her playtime almost every year of her childhood—loosely defined as being between ages 4 and 14.

### Hinge Interactivity on Proven Play Patterns

A play pattern is a traditional and almost instinctual way a child approaches an object or an activity to entertain herself. Traditionally girls value the following:

- Fashion play
- Glamour play
- Nurture play
- Action/twitch play
- Collection play
- Adventure play
- Communication/social play

*continues on next page*

### IESYCA DURCHIN'S ADVICE *continued*

As well as exercising their own imaginations, girls like to reproduce daily life in play. Barbie is a vehicle for projecting adult activities into a child's world. Don't be afraid of open-ended or non-goal-oriented play.

Here are a few more observations:

- **Girls like *stuff*.** Stuff is what the girl can collect, display, or take away from the product. It is incredibly important for the girl to feel there is a reason for her to play. In some ways, collecting stuff replaces the concept of scoring in traditional boy's software. Collecting each one of a variety of shells, for example, is more interesting than trying to achieve a high, but abstract, numerical score.
- **Create environments that are attractive to girls.** Girls like environments that are reality-based but are either beautiful or make sense to the story line. Symmetry and color coherency are important to girls. Not everything has to be pink, purple, and pretty, but each environment should give the girl the feeling of being in another place. Girls (and boys) are highly imaginative, and they create alternative story lines in their own heads. Be aware that the girl's imagination influences her view of your environment.
- **Girls appreciate sensual interfaces.** Girls tend to respond more positively to what is sometimes referred to as the sensual interface. They need colorful, sound-driven interfaces that "feel" good. The interface needs to feel magical and needs to have what I call the *brrrring* factor. Don't give girls a group of identical gray pushbuttons, no matter how logically organized they may be; give them buttons that ring and change shape and color.
- **Extend the play from existing toys or media into software.** Branding is becoming more and more important in the business of software. It is doubly important in the girl's software business because girls are still just getting involved in viewing the computer as an entertainment tool. Branding is important to rising above all the muck.
- **Don't be ashamed of your work.** If you're embarrassed by what you're doing, it will show. Do it wholeheartedly or don't do it at all. Girls can tell if you're ashamed of making games for them. If you're uncomfortable using terms like "hair play" or "relationship games," don't bother.

### KAYE ELLING'S FIVE CS

Kaye Elling was creative manager at Blitz Games on the *Bratz* series, and in 2006, she gave an insightful lecture called "Inclusive Games Design" at the Animex festival in the UK (Elling, 2006). Elling proposed five characteristics of games, all beginning with the letter C, that designers should strive for to make them more inclusive and accessible to girls.

- **Characterization.** As Chapter 10, “Character Development,” discusses, women (and girls) see avatars as someone who represents themselves rather than someone they simply control. Therefore, an avatar has to be someone girls can identify with, and to have no qualities they find distasteful.
- **Context.** Environments matter to girls, and they will be repulsed by environments that they find ugly or hostile. This advice concurs with Jesyca Durchin’s thoughts in the sidebar “Jesyca Durchin’s Advice.”
- **Control.** Girls like to feel as if they are in control of the game, rather than that it is in control of them. The risk-and-reward style of gameplay appeals less to girls because they don’t enjoy taking risks as much as boys do. They also dislike mechanics that harshly punish failure, because those mechanics discourage experimentation.
- **Customization.** Girls customize their mobile phones and other accessories more than boys do, so it makes sense that they would want to customize their games as well—especially their avatars. *Bratz: Rock Angelz* offered 686 different items of clothing, makeup, jewelry, and so on. The more desirable ones are unlockable rewards the player can earn for completing mini-games.
- **Creativity.** Creative play is a big part of what makes *The Sims* successful with girls and women. Creativity gives players a chance to express themselves and show off what they made to others. It’s not confined to girl games by any means; even in *Halo 2* players can design unique clan badges.



**TIP** *Puzzle Quest* is a Nintendo DS RPG that works very well for both boys and girls. Players can choose a male or female avatar, and combat is characterized as puzzle-solving. When the player loses a battle, his avatar is not killed, but simply runs away and can try again later.

## A FEW MISCONCEPTIONS

Because people see fewer girls than boys playing hardcore games, they tend to jump to conclusions about what girls want. This section corrects a few of these misconceptions.

- **Girls don’t like computer games because computers are techie.** This is patently false. Although most girls and women generally are less fascinated by the technical details of computers than are boys and men, that doesn’t discourage them from playing computer games any more than automotive specifications discourage them from driving cars.
- **Girls don’t like violence.** No, what girls don’t like is nonstop, meaningless violence. It’s not so much that they’re repulsed by it as that they’re bored by it. It doesn’t stimulate their imaginations. If you’ve seen one explosion, you’ve seen them all. Elling also points out that when violence is casual, sadistic, or excessively gory, it becomes brutality, and girls do not like brutality. When violence is defensive, provoked, or cartoony, it is more acceptable (Elling, 2006).
- **Girls want everything to be happy and sweet.** Not true. If you read books written specifically for girls, you’ll see that they’re not just saccharine from one end to the other. Girls like stories filled with mystery, suspense, even danger—but again, it has to be meaningful, not just random or pointless.

- **Girls don't like to be scared.** This is only partially true. Jesyca Durchin makes a useful distinction between *spooky* and *scary*. Girls like things that are spooky but not scary. The abandoned house or the carnival at night is spooky. Walking through dark streets with a murderer on the loose is scary. *Spooky* is about the possibility of being startled or frightened; *scary* is about the possibility of being hurt or killed.

## A FINAL NOTE ON GAMES FOR GIRLS

Bear in mind that these are generalities. The characteristics described previously do not appeal to all girls, but they certainly appeal to many. You should take them into consideration if you're trying to make a game for girls.

Some developers, both male and female, find the idea of making games about hair, clothing, and makeup repulsive; they feel that this perpetuates a stereotype of femininity. Although there's some merit in that argument, a vastly larger number of games perpetuate a much more unfortunate stereotype of masculinity: They depict men (and reward players) who are violent, greedy, wanton, and monomaniacal. To condemn games for girls on the basis that they reflect social stereotypes is to establish an unfair double standard.

## Gamer Dedication

In the previous edition of this book, this section was called “Core Versus Casual,” but in the past few years these terms have begun to lose their meaning. The game industry used to assume that there was a binary distinction between hardcore, deeply committed gamers and more casual ones. With the arrival of games built around social networks, it has become clear that this is not a binary distinction but a continuum called *gamer dedication*. You can measure gamer dedication by a variety of metrics. Barry Ip and I proposed a list of these metrics in our article “From Casual to Core: A Statistical Mechanism for Studying Gamer Dedication” (Ip, 2002). Some of them were borrowed from Scott Kim's Game Developers' Conference presentation “Designing Web Games that Make Business Sense” (Kim, 2001). Even though these are older articles, their content is fundamental enough to still be relevant today.

The 15 measurable qualities of dedicated gamers that Ip and I proposed are as follows:

1. **Technologically savvy.** Highly dedicated gamers are more familiar with the latest releases and developments and show greater interest in new gaming-related technologies.
2. **Have the latest high-end gear.** Dedicated gamers will acquire the latest consoles, PC hardware, and mobile devices to keep up to date with the most recent trends. They are more likely to own, or have owned, a wide variety of older game platforms.
3. **Willingness to pay.** Enthusiasts are more inclined to spend money on games and games-related products. Conversely, casual gamers are more inclined to wait for price discounts and special offers before committing to a purchase.



4. **Prefer violent/action games.** Kim suggested that hardcore gamers prefer games that show comparatively violent and action-intensive content.
5. **Prefer games that have depth and complexity.** Dedicated gamers prefer games that deliver greater complexity and that require a longer time to master, regardless of their themes.
6. **Play games over many long sessions.** Dedicated gamers are likely to devote considerably more time to playing games in a single session.
7. **Hunger for gaming-related information.** Devouring everything from the latest news, previews, and reviews, to interviews with industry experts, the hardcore gamer actively seeks gaming-related information through the Internet, game magazines, and books, such as strategy guides.
8. **Discuss games with friends online.** Dedicated gamers like to discuss gaming with others and to visit game-related Internet forums or chat rooms regularly.
9. **Play for the exhilaration of defeating (or completing) the game.** A dedicated gamer will play persistently for the enjoyment and exhilaration of defeating the game and is likely to be more forgiving of aesthetic flaws such as poor acting or a trivial plot.
10. **Much more tolerant of frustration.** Hardcore gamers are much more tolerant of difficult games or games that might frustrate them in some way. Casual gamers are more likely to abandon such games.
11. **Engaged in competition with himself, the game, and other players.** Hardcore gamers want to feel the satisfaction and reward of competing and improving their skills against other players and/or computer-controlled opponents. Less dedicated gamers would not, for example, be inclined to play endlessly to reduce their lap-times in *Gran Turismo* by a fraction of a second, or have the patience to learn every combination attack in *Street Fighter*, or even to achieve a higher score.
12. **Age at which first started playing games.** If players started playing at a young age, and have since been regular gamers, then this would indicate those who are more experienced and knowledgeable. Gamers who start playing later in life are seldom as dedicated.
13. **Comparative knowledge of the industry.** Dedicated gamers are likely to show broader knowledge and awareness of industry activities and trends, new technologies, and game development methods. Less dedicated players may keep track of upcoming releases and game reviews, but not events such as industry layoffs or mergers.
14. **Early adoption.** Dedicated gamers are the ones who attend midnight release events or take extra steps to get hold of games before their official release dates through gray-market imports.

**15. Desire to modify or extend games in a creative way.** Hardcore gamers frequently modify commercial games in a variety of ways. These can range from simple changes such as giving characters new skins to change their appearance to programming “aim-bots,” separate pieces of software that work in concert with an existing game to give the player an unfair advantage over others. Casual gamers seldom take the time to make these kinds of modifications; they tend to play the game as-is out of the box.

Of course, how much weight you give to each of these factors is up to you. The purpose of the original article was to suggest ways of measuring these for research purposes. As a designer, however, you really need to know only the ways in which gamers exhibit their dedication. For example, if you know that dedicated gamers seek out information about a game while it is still in development, you can set up developer blogs or give out press releases to help reach that market.

In reality, of course, there are as many types of gamer as there are games; everyone has a reason for playing computer games. But if you design a game specifically for one end of the dedication continuum, you probably won’t sell to many people at the other end. A few very well-designed games manage to appeal to both: *GoldenEye*, for example, can be played happily by both core and casual gamers. Core gamers can set the game at the highest difficulty level and drive themselves crazy trying to cut 15 seconds off the last time it took them to play a mission. Casual gamers can set the game at the easiest level and blast away, enjoying the game’s smooth controls and visual detail. *Rock Band* is another good example.

## The Dangers of Binary Thinking

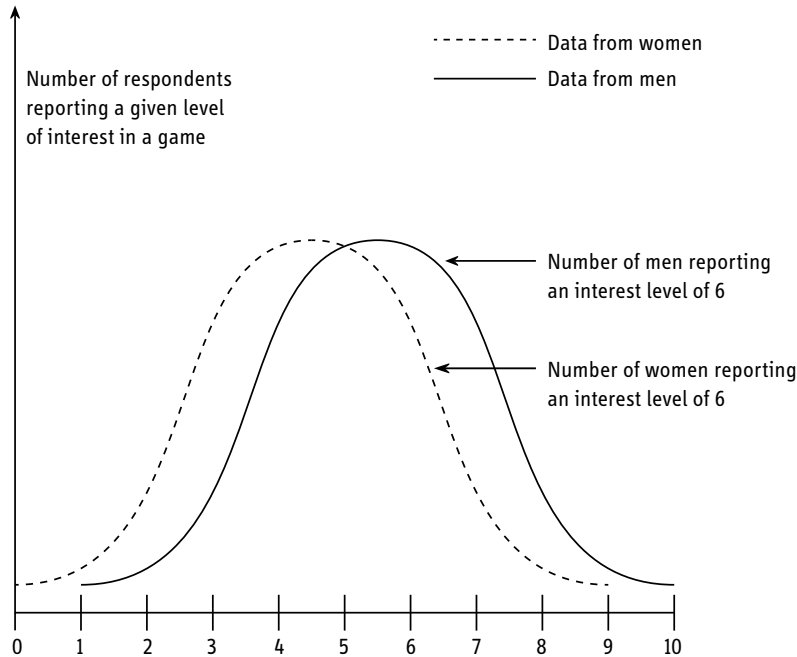
You can’t make a game for everyone, so your target audience is necessarily a subset of all possible players, a subset determined by your answers to the questions “Who will enjoy this game?” and “What kinds of challenges do they like?” As you answer these questions, you may be tempted to assume that the people in one category (adult men, for example) are a special audience that has nothing in common with people in other categories (adult women, children, teenagers, and so on). This is *binary thinking*: You assume that if group A likes a thing, everyone outside that group *won’t* like it. It’s unsound reasoning and may actually cause you to lose part of your potential customer base, as the following sections demonstrate.

## Reasoning Statistically about Player Groups

Suppose you ask a group of players to rate their level of interest in a particular game on a scale of 0 to 10, with 0 representing no interest at all and 10 being fanatical enthusiasm. A few people will be at the extremes and the majority somewhere in the middle. If you graph the responses of men and women separately, you may find

for a given game that the two groups have different arithmetic means; that is, the centers of their bell-shaped curves fall at different places on the graph.

Figure 4.3 shows this phenomenon. For the hypothetical game in question, men’s mean level of interest is at about 5.5, while women’s mean level of interest is at 4.5.



**FIGURE 4.3**  
Reported level of interest in a game on a 0–10 scale

Note that while the graph does support the statement, “Men have a higher level of interest in this game than women do,” in fact, a large area of overlap indicates that a significant portion of the women surveyed are interested in the game as well. Furthermore, the number of women reporting an interest level of 6 is about two-thirds that of the number of men reporting the same interest level. In other words, two-fifths of all the people reporting an interest level of 6 are women—far too many to simply ignore.

This is only a hypothetical example. With some games, the level of overlap may be small, and there is no point in trying to reach out to an audience that simply isn’t there. A game for five-year-olds won’t appeal to many 15-year-olds. The point, however, is that for most ordinary games there is *some* overlap among different populations. (For example, many Disney movies made for children include more sophisticated content that only adults would notice or find funny, thereby giving the film a broad appeal.) It is foolish to ignore, or worse yet, to offend a minority audience simply because it is in the minority, without knowing how many people fall into that category. If you ignore or repel a significant minority, you’re throwing money away.

## Strive for Inclusiveness, Not Universality

You cannot make a game that appeals to everyone by throwing in a hodgepodge of features because group A likes some of them and group B likes others. If you do, you will produce a game that has too many features and no harmony. For instance, you can't make a game that appeals to action fans, to strategy fans, and to fans of management simulations by combining kung fu, chess, and *Monopoly*—the result would be a mess that appeals to none of them. On the other hand, you can include a story line in a fighting game so long as the story line doesn't interfere with the gameplay. The story line adds depth to the game without driving away its key market of fighting-game enthusiasts, and it might attract the interest of people who otherwise wouldn't pay any attention to a fighting game. *Heavenly Sword* and *God of War* are good examples.

Certain groups are turned off by particular content or features. For example, women don't much care for material that portrays them as brainless sex objects; parents won't buy games for their kids if the games are nothing but blood and gore; members of minority races (and many in the majority too) are naturally offended by racist content. These are the most obvious examples, but there are more subtle ones as well. Women are generally more sensitive to the aesthetics of a game than men are, and they are less likely to buy a game with ugly artwork. Some players have no interest in narrative material and are put off if they are forced to watch it in a genre that doesn't normally include narratives. (This is why the story line in the kung fu game, mentioned earlier, shouldn't interfere with the gameplay.) These examples illustrate the effects of *exclusionary material*—content or features that serve to drive players away from a game that they otherwise might like. Your goal should be to make the best game that you can about your chosen subject, while avoiding exclusionary material that unnecessarily hurts its appeal.

### DESIGN RULE Keep Exclusionary Material Out of Your Game

To reach a large audience while still creating a harmonious, coherent game, don't try to attract everyone by adding unrelated features. Instead, work to avoid repelling people who might otherwise be attracted.

## Summary

The point of this chapter was to teach you about different kinds of players and what they want, and don't want, from their gameplaying experiences. You learned about Jason VandenBerghe's five domains of play: novelty, challenge, stimulation, social harmony, and threat; and a sixth one, storytelling. Then we looked at a few demographic categories, men and women and boys and girls, with a special focus on what it takes to make games for girls. We examined ways to think about gamer dedication and how that might affect your choice of target audience. The chapter ended with a discussion of the dangers of binary thinking, and the suggestion that you should strive for inclusiveness, not universality. In the next chapter we'll examine the different game platforms that you can design for.

## Design Practice EXERCISES

1. Take a Big Five personality test at any of the many online sites that offer it. (Simply search for "big five personality test" or visit [www.outofservice.com/bigfive](http://www.outofservice.com/bigfive).) Look at the results that it gives you and ask yourself how well they match your preferred domains of play. Do the same with several friends—the more, the better. Write a short paper using this data to explain whether the results you got tend to confirm or to rebut Jason VandenBerghe's hypothesis, or to produce inconclusive results.
2. Examine a currently popular AAA console game (or your instructor may assign you one) and document any exclusionary material that you think it contains—content that would tend to discourage a particular demographic from purchasing it.
3. Examine a number of games that are apparently marketed to a specific demographic such as girls or very young children. Document the design features that they seem to have in common. Be sure to address both the *types* of challenges they include (use the list in Table 1.1) and the details of their aesthetics—color palettes, typefaces, and screen layouts, for example.

## Design Practice QUESTIONS

Choosing a target audience for your game (or deciding that it does not belong in any genre) is part of defining your game's concept, a process that Chapter 7, "Game Concepts," discusses in detail. When you're thinking about it, consider the following questions:

1. Which of the domains of play do you think you will be offering, and what will that say about the audience that you hope to attract?

2. What age range is your game aimed at? The answer to this question will strongly influence many things about the game: its challenges, its user interface design, its pacing, its aesthetics, and so on.
3. Do you want to be gender inclusive, or do you want to appeal to one particular sex, bearing in mind that this may limit your game's appeal to the other? If the latter, what content and features do you plan to include that you think will appeal specifically to your chosen audience?
4. How dedicated will you want your target audience to be? Requiring long play sessions, for example, will exclude some players who don't have the time for it. Go through the list of factors that make up player dedication and ask yourself if you are expecting them from your players—and if so, how you plan to meet *their* expectations of your game.

## Numbers

- 2D display engine, 271–272
- 2D game worlds, 139–140, 155, 272, 278
- 2.5D game worlds, 140
- 3D camera model, 277
- 3D engines, 139, 271–272
- 3D game worlds, 70, 141, 302
- 3DO Interactive Multiplayer, 106
- 4D game worlds, 141–142

## A

- Absolute data values, 291–293
- Absolute difficulty, 322–324, 329, 420–425, 501
- Absolute size, scale, 142
- Abstract, defined, 501
- Abstract games, 37–38, 47, 138, 163
- Abstraction, 267
- Accelerometer, 292, 501
- Accents, character, 203–204
- Accessibility issues, 304–308
- Accuracy challenges, 324–325
- Action games
  - challenges, 324, 334
  - character growth, 201
  - defined, 501
  - level design, 443
  - overview of, 70–71
  - pacing, 453
- Action-adventure games, 132–133, 501
- Actions
  - core mechanics for, 355, 387–388
  - defined, 9, 501
  - designing progression, 452
  - in game balancing, 410–412
  - in gameplay, 339–342
  - UI design for, 258–260, 266, 272, 297
- Active camera mode, 274

- Active challenges, 355, 387, 501
- Adaptive music, 289, 501
- Adventure games
  - advancing plot, 233
  - challenges, 324, 329
  - character growth, 201
  - comedy and, 158
  - defined, 501
  - as genre, 77
  - as interactive story, 23
  - level design, 444
  - pace, 453
- Advertising and sponsorship, 119–120, 208
- Aerial perspective, 143, 275–277
- Aesthetics
  - of game designer, 63–64
  - in games that entertain, 18–21
  - level design implementing, 440
  - standards, 173–174
  - in world design documents, 55
- Agency, player, 501
- Alpha testing, 465
- Altitude advantage, 381
- Ambient sounds, 288–289, 451
- Analog input device, 291, 502
- Ancillary rewards, progression, 452
- Animal-like humanoids, 187
- Animations, 18, 272, 307
- Animé style, 189
- Anomalous time, 147–148
- Applied strategy, 334
- Arcade games, 70, 443, 453
- Arcade machine, 112
- Archetypal characters, 201–202
- Architecture, for visual design, 155
- Arena games, 71
- Art
  - concept, 192–193
  - game design as, 31–32

- game worlds and, 137, 150–153, 155
    - in level design, 461, 464
    - overenthusiasm in UI, 269
  - Art director role, 56
  - Art-driven games, 36, 502
  - Articy:draft, 242
  - Artificial intelligence (AI)
    - automated storytelling in, 228
    - bots, 179
    - cheating, 414
    - creating, 14–15
    - defined, 502
    - as entities, 364
    - for NPCs, 355
    - in online games, 472
  - Asymmetric games, 11, 413–416, 502
  - Asynchronous games, 27, 481–482, 502
  - Atmosphere, level design, 450–451
  - Atomic challenges
    - defined, 341, 502
    - in gameplay, 315, 317, 319–321
  - Atoms of interaction, 320
  - Attract loop, 502
  - Attributes
    - avatar, 168
    - character, 181, 198–199
    - compound entity, 359–360
    - cosmetic, 170
    - defined, 502
    - functional, 169–170
    - unit, 382–383
  - Atypical levels, 467
  - Audience, 47, 130, 133–134, 208
  - Audio
    - in character design, 202–204
    - in game design, 40, 56, 61
    - UI elements, 260, 287–290
  - Augmented reality
    - compasses for, 298
    - defined, 502
    - game world as, 14
    - GPS for, 292
    - on portable devices, 110
  - Autobiography, player, 489
  - Automation. *see also* emergent storytelling (narrative)
    - defined, 502
    - emergent storytelling, 228–230, 486, 508
    - of game saves, 345
    - of host migration, 474
    - making games fun, 315
    - reducing complexity, 267–268
  - Avatar
    - defined, 503
    - hairstyles/jewelry, 191
    - in persistent world, 488–489, 491–492, 496–499
    - in physical dimension, 139–142
    - player-designed, 86
    - relationship of player to, 182–186
    - role-playing, 176–177
    - in self-defining play, 167–171
  - Avatar-based interaction model
    - actions, 340
    - in character design document, 59
    - defined, 39, 503
    - emotional limitations of, 236–237
    - third-person perspective, 273–274
  - Avatar-oriented steering, 301–302
- ## B
- Backgrounder, 196–198, 503
  - Backgrounds, 279, 442
  - Back story, 149, 503
  - Balance
    - asymmetric games and, 413–416
    - avoiding dominant strategies, 405–411
    - avoiding stagnation/trivialities, 433–435
    - balanced games and, 403–405
    - chance and, 411–412
    - defined, 503



- easy tuning of, 435–436
  - fairness and, 412, 416–417
  - managing difficulty, 418–428
  - overview of, 403
  - positive feedback, 429–433
  - summary, 436–438
  - with symmetry, 413
  - in tuning stage, 54
  - Beat-em-ups, 71
  - Beginner's mode, 268
  - Bell-shaped curve, random numbers, 398–399
  - Beta testing, 465
  - Binary entities (flags), 365
  - Binary input device, 291, 297, 503
  - Binary thinking, dangers of, 98–100
  - Bingo fuel, 383
  - Blender, 3D modeling tool, 195
  - Blocks, 215, 496
  - Boss, 455, 503
  - Bot, 179, 503
  - Boundaries, game world, 144–146
  - Boys, games for, 89–92, 96
  - Brainstorming, 128
  - Brain-training games, 324
  - Branch points, 222–223, 225, 377, 503
  - Branching data structure, 239–245
  - Branching stories, 222–227, 503
  - Branding, and games for girls, 94
  - Brawlers (mêlée games), 3–4, 71
  - Broad interface, 268, 503
  - Browser-based PC games, 108–109
  - Bugs, 221–222, 314, 465
  - Build, elaboration stage, 52–53
  - Builder model, persistent worlds, 491
  - Bullet time, game world, 376
  - Business considerations, 105, 108–109
  - Buttons, 256, 269, 285, 297
- C**
- Camera, 272, 274–275
  - Camera models
    - 3D vs. 2D, 271–272
    - defined, 271, 504
    - in gameplay mode, 41
    - level of detail, 152
    - other 2D display options, 278–279
    - overview of, 39–40, 271
    - perspectives, 272–278
  - Cartoon physics, 352, 504
  - Cartoonlike qualities, 184, 187–189, 192
  - Censorship laws, 105, 122
  - Challenges. *see also* difficulty; fairness;
    - gameplay challenges
    - avoiding trial and error, 13
    - balancing chance with, 411–412
    - core mechanics for, 355–357, 386–387, 395
    - defined, 504
    - designing, 17–18
    - genre-specific, 67, 443–445
    - level design, 440–445
    - mini-maps warning player of, 284
    - pacing, 453–455
    - player action overcoming, 266
    - player motivations and, 82
    - plot advancement, 233–234
    - progression of. *see* progression
    - UI design for, 259
    - understanding, 8
  - Chance, 404, 411–412, 431
  - Character archetypes, 201–202
  - Character background paper, 196–198, 503
  - Character design document, 59–60
  - Character development
    - audio design, 202–204
    - character depth, 195–202
    - goals of, 181–182
    - player/avatar relationship, 182–186
    - summary, 204–206
    - visual appearance, 186–195
  - Character dimensionality, 199
  - Character level, 504
  - Character portraits, 285
  - Character-agnostic plots, 229–230

- Characterization attributes, 169–170, 198, 504
- Character-oriented map, 284
- Characters
  - designing growth of, 201, 452–453
  - in games for children, 92
  - in games for girls, 95
  - male/female players and, 87–88
  - player feelings influenced by, 156
  - storytelling based on, 210
  - UI design for, 261–262
- Chat Mapper, 242
- Chats, online games, 472, 494–496
- Cheated perspective, 276
- Cheating (verb)
  - of AI, 414
  - bots helping players with, 179
  - collusion as form of, 480–481
  - defined, 504
  - preventing player, 13, 318, 482–483
  - saving game and, 347
- Cheats (noun)
  - defined, 504
  - getting to story with, 83
  - offering to player, 419
  - player-adjustable functional attributes for, 170
  - technical security for, 482–484
- Checkpoint saving, 345–346, 460, 504
- Children
  - avoiding violence for, 162
  - chance in games for, 404
  - dislike for goody-two-shoes, 189
  - inspiring visual design for, 155
  - not changing perceived difficulty for, 423
  - player-designed avatar character for, 183
  - tolerant of little power over story, 216
  - tolerant of repetition in stories, 212
  - video games for, 89–92
- Choices. *see* decision-making
- Civilian flight simulators, 76
- Classical turn-based strategy games, 73
- Clichés, creating emotion using, 158–159
- Client/server communication model, 474, 484
- Cliffhangers, 217
- Closed captioning, for hearing-impaired, 307
- Clothing, character, 155, 191–193
- CMS (construction and management simulation) games, 76–77, 444
- Coarse granularity, 232
- Code, phase in, planning level design, 461
- Coherent stories, 211
- Collectible game world object, 504
- Collusion, 431, 480–481
- Color palette, 192–194, 450
- Color-blind players, 305–306
- Colored lights, as indicators, 292
- Colors, feedback via, 284–285
- Combination layouts, 449
- Combinatorial explosion, 226, 504
- Combo move, 326, 504
- Comedy, players valuing, 158
- Comic books, 155, 190, 194
- Commissioned (sponsored) games, 120
- Communication models, networked gaming, 474
- Compasses, 298
- Competition, 7, 11–12, 504
- Competition mode, 11–12, 130, 505
- Complaint mechanisms, chats in online games, 495
- Complexity, managing game, 267–269
- Components, video game, 37–40
- Compound entity, 359–360, 505
- Computer (programming) languages, 237
- Computer role-playing game (CRPG), 73–74, 505

- Concealment, landscape maneuvering, 380
- Concept. *see* game concept
- Concept art, 150–151, 192–193, 505
- Concept stage, 226, 505
- Conceptual non sequiturs, 441, 466–467
- Conceptual reasoning, 18, 338
- Conditional statements, 364
- Conditions, 364
- Conflict, 7, 17, 85–86
- Conflict challenge, 333–336, 505
- Conflict of interest, 333, 505
- Consequences, 223–226, 260
- Consistency, design for, 258
- Console games, 103–106, 113, 122
- Constrained creative play, 172–175, 505
- Constraints on movement, 375
- Construction, 18, 168–171
- Construction and management
  - simulation (CMS) games, 76–77, 444
- Content
  - games for children, 90
  - in level design process, 464
  - in online games, 475, 495
- Contestant-based interaction model, 270, 505
- Context-sensitive camera model, 278, 303–304, 505
- Context-sensitive interfaces, 268
- Continuity errors, linear stories, 222
- Continuous actions, 297
- Continuous scrolling, 505
- Continuous spaces, tactical maneuvering, 379–380
- Contractual obligations, and design documents, 57
- Control elements, 95, 256, 258
- Controllers
  - avatar, 184–185
  - buttons and keys, 297
  - console, 104
  - input device for PCs, 107
  - letting player do what she wants to do, 266
  - for mobility-impaired, 307
  - Wii Remote, 293
- Conventional games, vs. video games, 12–15
- Conversations, UI design for player-NPC, 262
- Converter, 368, 505
- Cool without attitude, characters, 190
- Cooperation, 11–12, 505
- Core mechanics
  - adjusting in tuning stage, 54
  - defined, 351, 506
  - designing, 51, 388–395
  - entities, 358–361
  - gameplay and, 41, 386–388
  - internal economy, 366–374
  - level design, 356–357
  - mechanics, 362–364
  - non-core mechanics vs., 366
  - numeric and symbolic relationships, 364–366
  - overview of, 37–38
  - progression mechanics, 374–378
  - random numbers and gaussian curve, 395–399
  - resources in, 358
  - social interaction, 383–386
  - summary, 399–402
  - tactical maneuvering, 378–383
  - understanding, 351–357
- Cosmetic attributes, 168, 170–171, 506
- Costs, 225–226, 430
- Crane, virtual camera, 271, 506
- Creative play, 171–175, 342
- Creative/expressive play
  - bots, 179
  - creative play, 171–175
  - designing challenges, 18
  - game modifications, 177–178
  - in games for girls, 95

- in games that entertain, 26
    - level editors, 178–179
    - overview of, 167
    - role-playing, 176–177
    - self-defining play, 167–171
    - storytelling play, 177
    - summary, 179–180
  - Credibility, 182, 211
  - Criminal behavior, in PvP combat, 497
  - Crippleware, 118, 506
  - Crowdfunding, 117
  - CRPG (computer role-playing game), 73–74, 505
  - Cultural context, 148–150, 154–155
  - Cultures, art styles in different, 189
  - Cumulative influence, branching stories, 223–224
  - Customer service, online games and, 476
  - Customization
    - avatar, 168–171
    - character/vehicle, 262
    - first-person perspective and, 272
    - games for girls, 95
    - input device, 308–309
  - Cute characters, 188
  - Cut-scenes, 215, 506
  - Cyber-bullying, 498
- D**
- Dance games, 325
  - Dating simulations, Japanese, 122
  - DDA (dynamic difficulty adjustment), 426–428
  - Deadlock, 370–371, 506
  - Death, avatar, 491–492
  - Deathmatch, 12, 448, 453, 506
  - Decay mechanics, 368
  - Decision-making
    - making PvE games fair, 417
    - moral, 159–161
    - storytelling, 223–224, 231, 233–234
  - Dedicated game handhelds, 110
  - Deep interface, 268
  - Deferred influence, branching stories, 223–224
  - Degree of freedom, 309, 506
  - Design. *see* game design
  - Design documents
    - of core mechanics, 353–354, 390
    - easy tuning with, 436
    - of game structure, 44–45
    - of gameplay modes, 263–264
    - overview of, 57–62
  - Designer-driven game, 35, 506
  - Desktop interaction model, 270, 507
  - Destruction, gameplay for level, 460
  - Detail, 152, 191, 314, 390–391
  - Deuteranomaly (color-blindness), 305–306
  - Developers, 114, 115
  - Development (dev) kit, 105, 507
  - Development stage, 45
  - Dialogue
    - engine, 377
    - interactive vs. noninteractive, 216
    - voiceover narration and, 290
    - writing, 64, 88, 176
  - Dialogue tree, 239–245, 507
  - Difficulty
    - absolute. *see* absolute difficulty
    - controlling positive feedback, 430
    - designing progression, 452
    - dynamic difficulty adjustment, 427–428
    - factors outside designer's control, 419
    - gameplay challenges, 323–333
    - modes of, 425–426
    - overview of, 418–419
    - perceived, 421–422
    - progression of, 422–425
    - relative, 420–421
    - universal level design principles, 442
  - Digital distribution, making money from, 115

- Digits, as indicators, 292
  - Dimensionality
    - of characters, 199–201
    - of input devices, 291
    - of space, 379–380
  - Dimensions
    - defined, 51, 507
    - emotional, 155–159
    - environmental, 148–155
    - ethical, 159–162
    - physical, 139–146
    - summary, 163–166
    - temporal, 146–148
  - Direct control, of avatar, 185
  - Direct costs, 406–407
  - Direct payment models, 115–117
  - Directional pads (D-pads), 285, 294–295, 303
  - Disk drives, newer console machines, 106
  - Display fonts, 287
  - Distortion, 143–144, 277
  - Distribution channels, 103, 114
  - DLC (downloadable content), 118, 507
  - Documents. *see* design documents
  - Dolly, 271, 507
  - Dominant strategy, 404–411, 413–416, 507
  - Downloadable content (DLC), 118, 507
  - D-pads (directional pads), 285, 294–295, 303
  - Drain, 367–368, 507
  - Drama, advancing story as, 235
  - Dramatic action, 213, 230–231, 507, 516
  - Dramatic compression, 212, 507
  - Dramatic freedom, 501
  - Dramatic tension, 217–218, 344, 507
  - Dreams, game ideas from, 125–130
  - Driving games, avatars as vehicles in, 167–168
  - Driving simulators, 76
  - Dungeon exit. *see* level exit
  - Dungeons & Dragons* model, 490
  - Dynamic camera models, 39
  - Dynamic difficulty adjustment (DDA), 426–428
  - Dynamic equilibrium, 373–374
- ## E
- Easter eggs, 333, 508
  - Economic challenges, 17, 336–338
  - Economy, 366, 493–494
  - Edge-of-the-world problem, 145
  - Educational games, 27, 120
  - Elaboration stage, 48–53, 246–247, 508
  - Electronic distribution model, 115
  - Elements, game, 3–7
  - Elevations, planning gameplay, 460
  - Embedded narrative, 228, 508
  - Emergence, 375, 508
  - Emergent storytelling (narrative), 228–230, 486, 508
  - Emerging world markets, 122–123
  - Emotes, 26, 176, 508
  - Emotional dimension
    - beware of simple formulas, 158–159
    - of endings to stories, 230–232
    - of game world, 155–156
    - influencing player feelings, 156–158
    - of interactive stories, 235–237
    - limitations of fun, 158
    - of linear stories, 222
    - sidekicks extending, 194
    - storytelling based on, 208
    - of three-dimensional characters, 200–201
    - of world design document, 55
  - Emotional resonance
    - achieving in games, 21–22
    - avoiding implausible extremes for, 157
    - defined, 508
    - harmony, 19
  - Empathy, 32–35, 442

- Encryption of data, 483
  - Endings
    - branching story structure, 225
    - challenges and choices, 231
    - storytelling, 230–231
    - UI design for game, 262
    - using multiple, 232
  - Enemies, eliminating, 378
  - Entertainment, games as
    - aesthetics, 18–21
    - creative/expressive play, 26
    - exploration, 25
    - gameplay, 16–18
    - learning, 25
    - novelty, 24
    - overview of, 16
    - in player-centric design, 32–33
    - progression, 24–25
    - risk/rewards, 23–24
    - role-playing, 26
    - socializing, 26–27
    - storytelling, 22–23, 207–208
  - Entities
    - converters as, 368
    - core mechanics and, 358–361, 393–394
    - defined, 508
    - with own mechanics, 364
    - relationships among, 362, 365–366
  - Entropy, 368
  - Environment progression, 452
  - Environmental dimension
    - cultural context, 148–150
    - detail, 152
    - ethical dimension, 159–162
    - first-person perspective, 272
    - of game world, 148
    - overused settings, 153–154
    - physical world, 150–151
    - sources of inspiration, 155
    - style, 152–153
    - summary, 165–166
  - Environments, games for girls, 94
  - Episodic delivery games, 116, 248–251
  - Equilibrium, static/dynamic, 373–374
  - Ethical dimension, of game world, 159–162
  - Ethnicity, character, 192
  - European cartoon characters, 189
  - European Galileo satellite navigation system, 293
  - Events
    - branching stories, 226
    - interactive stories, 213–214
    - level design for, 458–460
    - mechanics stating, 362
    - top-down perspective distancing player from, 276
  - Exchange, dialogue trees, 239, 508
  - Exclusionary material, 100, 508
  - Expectations, managing player, 74, 498
  - Experience duration, in progression, 452
  - Experience points (XP)
    - defined, 508
    - in leveling up, 514
    - in nonlinear stories, 234
    - raising level of challenges, 431
    - in RPG character levels, 362
  - Experimentation, games for children, 90
  - Expert mode, manual control as, 268
  - Explicit challenge, 317, 508
  - Exploits, in PVE games, 411
  - Exploration, 17, 25, 141, 329–333
  - Expressive play. *see* creative/expressive play
  - Extrinsic knowledge, 338–339
- ## F
- Face buttons, 297
  - Facebook games, 27
  - Faction-based PvP, 498
  - Factories, 359–360, 508
  - Factual knowledge challenges, 329

- Fairness
    - defined, 508
    - pay-to-win games violating, 118
    - in PvE games, 405, 407, 416–417
    - in PvP games, 412–416
    - as social metarule, 9–10
    - technical security for, 482–484
    - in well-balanced games, 403–405
  - Fantasy
    - avoiding overused settings, 153–154
    - customizing avatars as, 86
    - detail for, 152
    - player killing and, 498
    - presenting game world, 14, 51
    - selling game through, 138
  - Feature lock, 54, 509
  - Feedback
    - defined, 509
    - negative, 432–433
    - positive, 429–432
    - sensory, 288
  - Feedback elements
    - as animated character portraits, 285
    - defined, 509
    - overview of, 281–285
    - player-centric design for, 258
    - screen layout for, 265
    - showing success/failure, 260
    - sound effects/vibrations as, 288
    - as visual/audio elements, 256
  - Feedback loop, 370–371, 509
  - Feelings, influencing player, 156–158
  - Female players, 85, 87–88, 190
  - Fighting games, 71–72, 86, 100, 509
  - Files, saving to, 345
  - Filmmaking terminology, 271
  - Fine granularity, 232
  - First playable level, 509
  - First-person games, 143, 296, 302–304
  - First-person perspective, 272–273, 288, 509
  - First-person shooter (FPS), 70, 160, 509
  - Five Cs of games, 94–95
  - Five factor model, 81–83, 509
  - Fixed-wing aircraft, 303
  - Flags (binary entities), 365
  - Flat fee, mobile phone games, 111
  - Flight simulators, 76, 145, 148
  - Flow state, 418
  - Flowboard, 44–45, 60–61, 509
  - Flowcharts, 55–56
  - Flying games, 167–168, 302–303
  - Fog of war
    - cheating AI to see, 414
    - hidden in aerial perspective, 275
    - hidden in mini-maps, 284
    - overview of, 510
    - technical security, 484
  - Foldback story, 227, 510
  - Foregrounds, level design principles, 442
  - Formal logic puzzles, 17, 326
  - Formats
    - episodic delivery, 248–251
    - text, 286–287
  - FPS (first-person shooter), 70, 160, 509
  - Freeform creative play, 175, 510
  - Freemium model, 118–119, 122, 510
  - Free-roaming camera, 277–278, 510
  - Free-to-play model, 111, 119
  - Frequently Asked Questions (FAQ)
    - web page, 456
  - Friends, UI design for talking to, 262
  - Frustrated author syndrome, 247
  - Full-screen views with head-up display, 280–281
  - Fun, game, 158, 313–315
  - Functional attributes, 168, 169–171, 510
  - Funding agencies, design documents for, 57
- G**
- Gambling machines, video, 112
  - Game
    - balancing. *see* balance
    - defined, 510

- Game concept
  - brainstorming, 128
  - in concept stage, 45–48
  - defined, 510
  - defining target audience, 133–134
  - genres and hybrids, 132–133
  - getting idea, 125–129
  - in high concept document, 59
  - from idea to, 129–130
  - player's role, 130–132
  - progression considerations, 134–135
  - summary, 135–136
- Game design
  - anatomy of game designer, 62–65
  - approach to task of, 31–36
  - concept stage of, 46–48
  - documents, 57–62
  - elaboration stage of, 48–53
  - key components of, 37–40
  - structure of, 40–45
  - summary, 65–66
  - team roles, 54–57
  - tuning stage of, 54
- Game designers
  - anatomy of, 62–65
  - difficulty factors outside control of, 419
  - documents, 57–62
  - filmmakers vs., 247
- Game engine, 354, 510
- Game idea vs. design decision, 57
- Game Maker tool, 49
- Game modifications (mods), 177–178, 515
- Game script, 61–62
- Game theory, 7, 510
- Game treatment document, 58–59, 510
- Game tree, 511
- Game violence, ethical dimension of, 161–162
- Game world
  - builder role in, 55
  - camera models for, 39–40
  - conventional vs. video games, 14
  - defined, 511
  - defining in elaboration stage, 51
  - emotional dimension, 155–159
  - environmental dimension, 148–155
  - ethical dimension, 159–162
  - game concept of, 130
  - in isometric perspective, 277
  - narrative introducing player to, 214
  - overview of, 137
  - physical dimension, 139–146
  - in prototype phase of level design, 462
  - purposes of, 138
  - realism in, 162–163
  - in role-playing games, 73
  - summary, 163–166
  - temporal dimension, 146–148
  - UI design showing player in, 259
  - understanding, 137–138
  - in world design document, 60
- Gameplay
  - actions, 9, 339–342
  - challenges, 323–333
  - core mechanics, 386–388
  - defined, 9, 511
  - detail level in, 152
  - as entertainment, 16–18
  - as first thing, 16, 210
  - in handheld devices, 110
  - level design, 459–460
  - multiplayer. *see* online games
  - narrative in, 214–217, 219–220, 440
  - overview of, 7–8
  - persistent worlds vs. ordinary, 486–487
  - player-adjustable characterization attributes, 169–170
  - rules, 6
  - saving game, 343–347



- storytelling engine, 219–221
- structuring around characters, 181
- summary, 348–350
- tension, 217–218
- Gameplay challenges
  - absolute difficulty, 322–323
  - commonly used, 323–324
  - conceptual reasoning puzzles, 338
  - conflict, 333–336
  - economic, 336–338
  - exploration, 330–333
  - factual knowledge, 329
  - hierarchy of, 315–321
  - lateral thinking, 338–339
  - logical and mathematical, 326–328
  - making it fun, 313–315
  - memory, 329
  - overview of, 8, 313
  - pattern recognition, 330
  - physical coordination, 324–326
  - paces and time pressure, 328–329
  - skill, 321–322
  - stress, 322
- Gameplay mode
  - core mechanics switching, 355
  - creating additional, 51
  - defined, 41, 511
  - mixed genres in, 67
  - primary, 50, 129
  - in UI design, 263–264, 266
  - video game structure, 40–44
- Gameplay tension, 217–218, 511
- Gamer dedication, 96–98, 511
- Games
  - competition and cooperation, 11–12
  - conventional games vs. video, 12–15
  - definition of, 2
  - entertainment and. *see* entertainment, games as
  - essential elements of, 3–7
  - fairness, 9–10
  - game ideas from other, 127–128
  - gameplay, 7–9
    - serious, 27–28
    - summary, 29–30
    - symmetry and asymmetry, 10–11
    - things they are not, 7
    - toys, puzzles and, 1–2
- Gaussian curve and random numbers, 398–399
- Gender
  - biggest turnoffs for women, 85
  - dangers of binary thinking, 98–100
  - games for boys/girls, 89–92
  - games for men/women, 84–88
  - sex of avatar, 171
- General numeric indicators, 292
- Generalized mechanics, 389–390, 435
- Genres
  - action and arcade games, 70–78
  - adventure games, 77
  - communicating to others, 128
  - in concept stage, 129, 132–133
  - construction and simulation games, 76–77
  - defined, 511
  - fighting games, 71–72
  - overview of, 67–68
  - platform games, 71
  - puzzle games, 78
  - role-playing games, 73–74
  - shooter games, 69–70
  - sports games, 74–75
  - stories not included in all, 134–135
  - strategy games, 72–73
  - subgenres, 68
  - summary, 79
  - vehicle simulations, 75–76
- Genre-specific level design principles, 443–445
- GIMP (GNU Image Manipulation Program), 195
- Girls, games for, 89–96
- Global mechanics, 362, 367, 395, 511
- Global positioning systems (GPS), 110, 292–293

- GNU Image Manipulation Program (GIMP), 195
  - Goals
    - challenges as obstacles to, 8
    - of character design, 181–182
    - of core mechanics design, 389–391
    - defined, 511
    - as game element, 2, 5–6
    - in games for children, 90
    - level design for, 441
    - narrative as reward for player, 214
    - in persistent worlds vs. ordinary games, 485–486
    - rules defining, 6
    - tactical maneuvering, 378
  - Goody-two-shoes characters, 190
  - Goofy characters, 188
  - GPS (global positioning systems), 110, 292–293
  - Grammar, of character, 203
  - Granularity, 232, 511
  - Graphics, 40, 104
  - Gravity, accelerometers, 292
  - Griefing, 494, 511
  - Group play, 27, 511
  - Growth, serious games for, 28
- ## H
- Hairstyles, identifying characters via, 191
  - Hammer 3D editor, 178–179
  - Hand-eye coordination, games for children, 89
  - Handheld devices, 110, 265
  - Handicaps, 11, 512
  - Handoff, design to level design, 458–459
  - Hardware, 105, 109
  - Harmony
    - of character design, 181
    - defined, 512
    - game designer competence in, 63–64
    - in games that entertain, 19
    - player motivations and, 82
    - typefaces for, 287
  - Harry Potter books, 90
  - Head-up display (HUD), 280–281, 512
  - Health, serious games for, 28
  - Hearing-impaired players, 306–307
  - Heartbeat, 483, 512
  - Helicopters, navigation mechanism, 303
  - Hero's Journey story structure (Campbell), 234
  - Hex grids, 380
  - Hidden information, local multiplayer gameplay, 473
  - Hidden objects, exploration, 332–333
  - Hidden regions, progress through space, 376
  - Hierarchy of challenges, 315–321, 512
  - High concept document, 59, 512
  - High concept statement, 129–130
  - High-fidelity prototypes, 49
  - Home game consoles, 103–106, 113, 122
  - Host, P2P communication model, 474
  - Hostage-rescue scenarios, 161
  - Hub-and-spoke layouts, 448–449
  - HUD (head-up display), 280–281, 512
  - Human intelligence, online games, 472
  - Humanoid characters, 186–187
  - Hybrid characters, 186–187
  - Hybrid competition modes, 12
  - Hybrid games, 132–133
  - Hypersexualized characters, 188, 190–191, 512
- ## I
- IBM PCs, 106–107
  - Icons, 269, 292
  - Idea, getting game, 125–129
  - Illogical spaces, 331–332, 376
  - Imaginary racing driving simulators, 76

- Imagination, 9, 62, 94
  - Immediate influence, branching story, 223–224
  - Immersion
    - defined, 512
    - including detail for, 152
    - overview of, 20–21
    - player attitudes to, 83
    - in real-time vs. turn-based games, 479
    - saving of game affecting, 344
  - Immutable rules, 10, 512
  - Implausible extremes, avoiding, 157
  - Implicit challenge, 317–318, 512
  - In-app purchases (IAPs), 111, 118, 512
  - India as emerging market, 122–123
  - Indicators, 281–283, 513
  - Indirect control, designing own avatar, 185
  - Indirect payment models, 118–120
  - Indoor locations, game world, 144, 150
  - Infinitesimal granularity, 232
  - Influence map, 513
  - In-game events, 212, 513
  - In-game experience, 420–424, 513, 518
  - Innovation, 257, 314
  - Input devices
    - accessibility issues, 304–308
    - as control elements, 256
    - customization of, 308–309
    - designing core mechanics
      - independent of, 256
    - home game consoles, 104–105
    - mapping to player's actions, 266
    - navigation mechanisms, 300–304
    - one-dimensional, 297–299
    - overview of, 290–291
    - PCs, 107
    - terminology, 291
    - three-dimensional, 292–294
    - two-dimensional, 294–296
  - Inspiration
    - environmental dimension, 155
    - for game world, 153–154
    - visual design, 155
  - Intangible resource, 369–370, 513
  - Intellectual property rights, 127, 178
  - Interaction, adventure games, 77
  - Interaction model
    - actions, 340
    - defined, 513
    - in gameplay mode, 41
    - mapping input devices to player's
      - actions, 266
    - types of, 269–270
    - user interface as, 255
    - as video game component, 39
  - Interactions, 94, 131, 156
  - Interactive, games as, 3
  - Interactive fiction, 40, 513
  - Interactive narratives, 208, 486
  - Interactive stories
    - adventure game as, 23
    - branching story as, 225
    - debate on, 208
    - defined, 214, 513
    - emotional limits of, 235–237
    - events in, 213–214
    - other considerations, 247–251
  - Intermediate challenges, 318
  - Internal economy
    - core mechanics operating, 355
    - defined, 352, 513
    - overview of, 366–372
  - Intransitive relationships, 408
  - Intrinsic skill required, 321–323, 513
  - Irresolution, elaboration stage, 48
  - Islamic world market, 123
  - Isometric perspective, 143, 276–277, 301
  - Iterate, elaboration stage, 52–53
- J**
- Jewelry, identifying characters, 191

Journey, treating story as, 234  
 Joysticks, 107, 295–296, 303–304,  
 308–309

## K

Keyboard, 107  
 Keys, 256, 297, 303, 309  
 Kinect motion-capture device,  
 Microsoft Xbox, 105, 298–299  
 Knobs, 298

## L

Lag, 513–514  
 LAN parties, 27  
 Landmarks, 460  
 Landscape objects, 274–275, 381  
 Language  
   natural vs. computer, 237  
   scripted conversations. *see* scripted  
     conversations  
   voice and, 203–204  
   world market issues, 120–123  
 LANs. *see* online games  
 Latency, online gaming, 474  
 Lateral thinking puzzles, 338–339  
 Layouts, planning, 459  
 Layouts, types of, 445–449  
 Lead designer role, 54  
 Lead programmer role, 56  
 Learn-by-dying designs, 417, 441–442  
 Learning process, 25, 85  
 Length, storytelling, 208, 210  
 Level, 514  
 Level access codes, 344  
 Level design  
   core mechanics and, 356–357  
   in elaboration stage, 52  
   narrative blocks between levels, 215  
   principles, 445–470  
   progression, 134–135  
   in story and level progression  
     document, 56  
   in tuning stage, 54

Level design principles  
   atmosphere, 450–451  
   genre-specific, 443–445  
   layouts, 445–449  
   level design process, 457–465  
   pacing, 453–455  
   pitfalls, 465–468  
   progression, 451–453  
   summary, 469–470  
   tutorial levels, 455–457  
   understanding level design,  
     439–440  
   universal, 441–442  
 Level designer role, 55, 439–440, 458  
 Level editors, 178–179  
 Level exit, 433, 514  
 Level review, 463  
 Level warp, 514  
 Leveling up or leveling, 514  
 Licenses  
   character, 130  
   commissioning games to exploit,  
     35  
   for console machine games, 105  
   for fonts, 287  
   for intellectual property rights, 127  
   overview of, 514  
 Lighting, 450, 462  
 Limited series, 250–251, 514  
 Linear layouts, 445–446  
 Linear stories, 221–222, 247, 514  
 Local multiplayer gameplay, 472–473  
 Localization, 286, 514  
 Locations, game world, 144–146  
 Lock-down, level design, 464  
 Locked doors, 331, 375  
 Logical challenges, 89, 326–328  
 Logistics challenges, 335  
 Loss condition, 6, 161, 491–492, 514  
 Low-vision players, UI design, 305

## M

Machinations, 372, 515

- Machines
  - home game consoles, 103–106
  - name of, 130
  - nonhumanoid characters shaped
    - like, 187
  - other devices, 112
  - personal computers, 106–109
  - portable devices, 109–111
  - summary, 112–113
- Magic circle, 3–7, 137–138, 515
- Magnification, vision-impaired
  - players, 305
- Main view, 265, 280–281, 515
- Make-believe, 162
- Male players and characters, 87–88
- Mana, 515
- Manager game, 515
- Maneuverability attribute, of units, 382
- Manual control, 268
- Manufacturing, retail sales model, 114
- Market-driven games, 35, 515
- Marketing, 114–115, 130
- Massively multiplayer online games (MMOGs)
  - complex interface of, 341
  - originally paid for by subscription, 115
  - persistent worlds dominating, 251, 484
- Massively multiplayer online role-playing games (MMORPGs), 27, 176, 485
- Mastery, enjoyment of learning, 25
- Mathematical challenges, 326–328
- Mattel, games for girls, 94
- Mazes, exploration challenges, 331–332
- Mechanics
  - analyzing, 363
  - conditions, 364
  - defined, 362
  - designing progression, 451–452
  - entities with their own, 364
  - events and processes, 362
  - relationships among entities, 362
- Mechanics designer role, 55
- Media, game ideas from other, 126–127
- Meditation, 493
- Mêlée games (brawlers), 3–4, 71
- Memory
  - contained in Wii Remote, 293
  - designing challenges in gameplay, 17, 329
- Men
  - games for women and, 84–88
  - reasoning statistically about player groups, 98–99
  - strive for inclusiveness, not universality, 100
- Mental challenges, popular with women, 86
- Menus
  - managing complexity of, 268–269
  - screen buttons and, 285
  - as visual and control elements, 256
- Mermaids, 187
- Metarule
  - definition of, 6
  - fairness as social, 9–10
  - resolving conflicts with, 7
- Mexico, world market, 123
- Microgames, 24, 515
- Microsoft PowerPoint, prototyping with, 264
- Military flight simulators, 76
- Mini-maps, 284, 515
- Mixed reality. *see* augmented reality
- MMOGs. *see* massively multiplayer online games (MMOGs)
- MMORPGs. *see* massively multiplayer online role-playing games (MMORPGs)
- Mobile phones
  - 3D graphics on low-end, 272
  - game handhelds vs., 109
  - playing games on, 111
  - screen layout challenges, 265

- Mobility-impaired players, 307, 423
  - Model sheet, 192–193, 515
  - Moderated chat spaces, online games, 496
  - Mods (game modifications), 177–178, 515
  - Money, making from your game
    - direct payment models, 113–117
    - in game concept, 130
    - indirect payment models, 117–120
    - in online games, 475
    - summary, 123–124
    - world markets, 120–123
  - Monitors, 21, 305
  - Monospaced fonts, 287
  - Monster generator, 515
  - Monsters, 187
  - Monte Carlo simulation, 396–397, 515
  - Mood, setting, 151
  - Mood indicators, 176
  - Moral decision-making, 157, 159–161
  - Motion capture, 50
  - Motion-sensitive controllers, Wii, 104–105
  - Motivations, game development, 35–36
  - Mouse, 107, 296, 303, 308–309
  - Movement
    - aesthetics for, 18
    - of avatar, 183
    - in first-person perspective, 272
    - obstacles to, 380
    - in third-person perspective, 274
    - UI design for player, 261
  - Moveset, 59–60, 516
  - Movies, visual design inspiration, 155
  - MUDs (multiuser dungeons or domains), 485, 488
  - Multilinear stories, 227
  - Multiplayer competitive mode, 12, 13
  - Multiplayer cooperative mode, 12
  - Multiplayer distributed gaming, 27, 516. *see also* online games
  - Multiplayer games
    - difficulty modes, 425
    - evoking widest variety of emotions, 159
    - online vs. local, 472–473
    - UI design for talking to friends in, 262
    - unpredictability of human opponents, 25
  - Multiplayer local gaming, 26, 104, 516
  - Multiplayer online games, 183
  - Multipresent interaction model, 39, 270, 303–304, 516
  - Multitouch interface, touch-sensitive devices, 296
  - Music
    - audio design, 202–203
    - level design, 451
    - setting mood, 151
    - setting tone and pace, 289
    - timing/rhythm challenges, 325
  - Mutable rules, 10, 516
  - Mutual dependency, 370–371, 516
- ## N
- Naming characters, 192, 489
  - Narrative
    - concept-formation stage of content, 135
    - defined, 516
    - dialogue and voiceover, 290
    - emergent, 228–230
    - events, 213, 440, 516
    - granularity and, 232
    - overview of, 214–217
    - storytelling engine and, 219–221
  - Narrative events
    - defined, 213, 516
    - infinitesimal granularity of, 232
    - level design for, 440
    - overview of, 214
    - storytelling engine weaving, 219–220

- Narrative immersion, 21, 83  
 Native talent, 419–420, 426, 516  
 Natural language, 15, 237, 516  
 Navigation mechanisms, 261, 300–304  
 Needle gauge indicator, 292  
 Negative feedback, 432–433  
 Nena Media, 93–94  
 Network layouts, 447–448  
 Networked play  
   on console machines, 105–106  
   defined, 516  
   on mobile phones/other networked devices, 109  
   overview of, 473–476  
   social interaction in, 27  
 Neutral positions, input devices, 291  
 Node. *see* branch points  
 Nondisclosure agreements, console machine games, 105  
 Nonhumanoid characters, 186–187  
 Noninteractive sequences, narrative, 215–217  
 Nonlinear stories  
   branching stories, 222–226  
   defined, 516  
   emergent narrative, 228–230  
   emotional limits of, 236  
   foldback stories, 227  
   overview of, 222  
   RPG journeys with, 234  
 Non-player characters (NPCs)  
   defined, 517  
   as entities with own mechanics of, 364  
   level design process, 458–460, 462  
   UI design for, 261–262  
 Nonspecific avatars, 184, 186  
 Nonuniform distribution, 398  
 Novelty, 24, 82, 234  
 NPCs. *see* non-player characters (NPCs)  
 Numbers, 261–262, 395–399  
 Numeric entities, 364  
 Numeric indicators, 282, 284–285  
 Numeric relationships, 364–366  
 Nunchuck, 293
- O**
- Object (of a game). *see* goals  
 Objects, UI design for, 261  
 Observation range attribute, units, 382  
 OCEAN acronym, 81  
 Older players, accessibility for, 307  
 Omnipresent interaction model, 270  
 One-dimensional characters, 199–200  
 One-dimensional input devices, 297–299  
 One-shot actions, controller buttons and keys, 297  
 One-way door, 234, 375, 517  
 Online games  
   advantages, 471–473  
   asynchronous, 481–482  
   definition of, 471  
   design issues, 476, 480–481  
   disadvantages, 473–476  
   participation of men vs. women, 85  
   persistent worlds in, 484–494  
   social problems of, 494–499  
   summary, 499–500  
   synchronous, 476–481  
   technical security, 482–484  
 On-screen text and audio dialog script, 61–62  
 Open layouts, 445  
 Optical disks, 110  
 Options, UI design for setting, 262  
 Orders, UI design for player giving, 262  
 Ordinary games vs. persistent worlds, 485–487  
 Organized racing driving simulators, 76  
 Orthogonal unit differentiation, 409  
 Orthogonal variables, two-dimensional characters, 200

- Outdoor locations, game world, 144, 150
  - Output devices, 256
  - Ouya microconsole, 106
  - Overlays, 280–281
  - Overused settings, environmental dimension, 153–154
- P**
- P2P (peer-to-peer) communication model, 474
  - Pace, 441, 453–455, 460, 517
  - Packets, 475, 483
  - Painted backgrounds, 2D display, 279
  - Pan, virtual camera, 271, 517
  - Paper prototypes, 49–50, 62
  - Parallax scrolling, 517
  - Parallel layouts, 446–447
  - Partially-specified avatar, 184–186
  - Participation, actions for, 342
  - Party, 517
  - Party-based interaction model, 237, 270, 303–304, 517
  - Passive camera mode, 274
  - Passive challenge, 387, 517
  - Pathfinding, 15, 303, 517
  - Pattern recognition
    - designing challenges in gameplay, 17, 330
    - generalizing in core mechanics, 389–390
    - using AI for, 15
  - Pause feature, 376
  - Pay-to-win, 118, 517
  - PCs (personal computers), 105–109
  - Peer-to-peer (P2P) communication model, 474
  - Penalties, for avatar death, 491–492
  - Perceived difficulty
    - consistent range of, 405, 418, 425
    - creating progression of, 422–425, 452
    - overview of, 420–421
  - Perfect information game quality, 334, 518
  - Performance, level design, 461
  - Permanent death, of avatar, 491
  - Permanent upgrade, 518
  - Persistent worlds
    - avatar death in, 491–492
    - balance issues, 416
    - creating avatar, 488–489
    - defined, 518
    - economies, 493
    - nature of time in, 492–493
    - in online games, 251, 484–485
    - ordinary games vs., 485–487
    - secrets to successful, 494
    - types of players, 488
    - world models, 490–491
  - Persona, names revealing character, 192
  - Personal computers (PCs), 105–109
  - Personality expression, 167–168
  - Perspective
    - aerial, 275–278
    - defined, 518
    - first-person, 272–273
    - scaling physical space for, 143
    - in shooter games, 69–70
    - third-person, 273–275
  - Persuasive games, 28
  - Phablet, 109, 518
  - Phillips CD-I Player, 106
  - Photorealistic characters, player response to, 185
  - Physical appearance, avatars in persistent worlds, 489
  - Physical aspects of game world, 150–151
  - Physical body types of characters, 187–191
  - Physical coordination challenges, 17, 324–326
  - Physical dimension, game world, 139–146



- Physical prototypes, 50
- Physical skills, 71–72
- Physical standards, constrained
  - creative play, 172–174
- Physical stress, UI design for, 258
- Physics, as game mechanics, 352
- Piaget, Jean, 89–92
- Pitch, varying for repeated sounds, 288
- Plan-and-build, 518
- Planning phase, level design process, 459–462
- Platform games (platformers), 71, 324, 518
- Play, 2–3, 518
- Player events, 212–214, 518
- Player-centric design
  - avatar characters, 183
  - defined, 518
  - defining target audience, 134
  - overview of, 32–36
  - UI design for, 257–262
- Player-killing, 496–499, 518
- Player(s)
  - accessibility issues, 304–307
  - action game, 71–72
  - actions triggering mechanics, 388
  - adjusting camera in third-person games, 275
  - adventure game, 77
  - agency denied in linear stories, 222
  - agency in branching stories, 222–226
  - agency in emergent narratives, 228–230
  - agency limited in foldback stories, 227
  - agency when advancing plot via journey, 234
  - assigning actions to keys, 297
  - attitudes to storytelling, 83–84
  - binary thinking and, 98–100
  - in concept stage of design, 47
  - conceptualizing actions/role of, 129, 131–132
  - creating autobiography for
    - persistent world, 489
  - in gameplay mode, 41
  - gamer dedication, 96–98
  - games for boys and girls, 88–92
  - games for girls, 92–96
  - games for men and women, 84–88
  - influencing feelings of, 156–158
  - information about challenges, 317
  - longer stories making longer games
    - for, 208
  - male and female players/characters, 87–88
  - managing expectations of, 498
  - online game issues of arriving, 476–477
  - online game issues of disappearing, 477–479
  - in persistent worlds vs. ordinary games, 486
  - player-centric UI design for, 258–262
  - relationship between avatar and, 182–186
  - of shooter games, 69–70
  - summary, 101–102
  - type of persistent world, 488
  - unable to control narrative events, 214
  - understanding your, 81
  - user interface mediating core mechanics and, 37
  - VandenBerghe’s Five Domains of Play, 81–83
- Player-versus-environment (PvE) game
  - avoiding stagnation, 433
  - balancing, 404–405
  - defined, 519
  - dominant strategy in, 410–411
  - fairness in, 416–417
- Player-versus-player (PvP) game
  - avoiding stagnation, 433–434
  - balancing, 404–405
  - defined, 519

- dominant strategy in, 406–410
- faction-based, 498
- fairness in, 412–416
- persistent world model, 490–491
- regulating combat, 497–498
- Plot
  - in branching stories, 222–226
  - in emergent narratives, 228–230
  - in episodic delivery formats, 248–250
  - in foldback stories, 227
  - in interactive stories, 213–214
  - in linear stories, 221–222
  - mechanics of progression, 377
  - methods of advancing story, 233–235
  - storytelling engine role in, 220
- Poetry, inspiring video games, 127
- Point assignment system, 414–415
- Point-and-click navigation, 139, 303–304
- Pong paddles, 298
- Portable devices, 109–111
- Positional audio, 288, 518
- Positive feedback, 404, 429–433, 518
- Power bar, 292
- Power provided, 420–423, 518
- Powerup, 411, 519
- Precision challenges, 324–325
- Premature endings, 231, 236
- Presentation layer. *see* user interface (UI)
- Pressure-sensitive buttons, 298
- Pretending, 1, 3–5, 519
- Previous experience, 419–422, 426, 519
- Primary gameplay mode, 129, 263–264, 341
- Procedural rhetoric, 28, 519
- Processes, 354, 362
- Producer role, 56
- Production mechanism, 369, 519
- Production rate, 367
- Profanity filters, 495
- Professionalism, 33–34
- Programming (computer) languages, 237
- Programming objects, and entities, 360
- Progression
  - at concept stage, 134–135
  - creating difficulty, 422–425
  - defined, 519
  - level design for, 451–453, 467–468
  - mechanics, 353, 375–378
  - overview of, 24–25
  - UI design for, 260
- Project manager role, 56
- Props, 191, 458–459, 462
- Protagonists, 50–51, 87–88
- Prototypes
  - building/testing, 52, 264
  - in elaboration stage, 49–50
  - in level design, 462–464
- Pseudo-random numbers, 396–398, 436, 519
- Publishers
  - looking to create fun, 158
  - marketing game concept to, 128, 130, 132
  - retail game conservatism of, 114–115
- Purchase-and-place, 519
- Pure strategy, defined, 334
- Puzzle games
  - challenges, 324, 327–328, 338–339
  - for children, 89
  - finding hidden objects in, 332–333
  - formal logic puzzles, 326–327
  - as genre, 78
  - level design for, 445
  - popularity with women, 86
  - strategy games vs., 73
- Puzzles, 1–2, 519
- PvE game. *see* player-versus-environment (PvE) game

PvP game. *see* player-versus-player (PvP) game

## Q

Quality, 32  
 Quantity of ideas, brainstorming, 128  
 Quick start mode, 520  
 Quick-save, 345, 520

## R

Races, time pressure challenges, 328–329  
 Racing through space, 378  
 Radar screen, 170, 284  
 Random numbers, and gaussian curve, 395–399  
 Randomness, and dramatic tension, 218  
 Range attribute, units, 382–383  
 Range of fire attribute, units, 382  
 Reaction time challenges, 324  
 Reading ability, games for children, 90  
 Real world  
   games of augmented/mixed reality, 14  
   magic circle vs., 3–5  
   sports games simulating, 74–75  
   unclear line between fantasy and, 162  
   in vehicle simulation games, 75  
   winning/losing games affecting, 6  
   women maintaining social fabric of, 85  
 Realism  
   avoiding conceptual non sequiturs in games, 466–467  
   overview of, 520  
   as quality of game world, 37–38, 51, 162–163  
   storytelling based on game's, 208  
 Real-time games, 355–356, 479–480, 484  
 Real-time strategy (RTS) games, 73, 334, 335

Records, 57  
 Rectangular grids, 380  
 Reducing enemy forces challenge, 335  
 References for this book, 527–532  
 Regions, controlling space, 378  
 Relationships  
   intransitive, 408–409  
   numeric and symbolic, 364–366  
   positive feedback, 429  
   stating between entities, 362  
   transitive, 405–407  
 Relative data values, 291, 296  
 Relative difficulty, 420–425  
 Relative size, scale in game world, 142  
 Repeating actions, controller buttons and keys, 297  
 Repetition  
   in dialogue and voiceover, 290  
   dramatic tension and, 218  
   harming player immersion, 212  
 Representational games  
   in concept stage, 47–48  
   defined, 37–38  
   overview of, 520  
   realism in, 163  
   stories in, 135  
 Representative player  
   applying five factor model to, 81–83  
   defined, 520  
   player-centric approach, 32–33  
   testing every design decision against, 47  
 Reputation  
   avatars in persistent worlds, 489  
   for PvP combat justice, 497  
 Requirements specification, 209, 520  
 Research, of game designer, 64  
 Resolution, 107, 109, 305  
 Resources  
   accumulating, 337  
   converting resources into other, 368  
   in core mechanics design, 358, 393–394

- drains determining consumption of, 367–368
  - entities vs., 358–359
  - feedback loops, mutual dependencies, and deadlocks, 370–371
  - level design principles for, 441
  - overview of, 520
  - in planning phase, 460
  - production mechanisms for, 369
  - tangible/intangible, 369–370
  - what player needs to know, 260
  - Restore defaults, 309
  - Resurrection of avatar, 2, 491
  - Retail sales, 113–115
  - Reversing time, 376
  - Rewards, 23–24, 430, 452. *see also* risk/reward mechanism
  - Rhythm challenges, 325
  - Ride simulators, theme parks, 112
  - Rigging, 462, 464, 520
  - Ring layouts, 447
  - Risk/reward mechanism
    - in games that entertain, 23–24
    - influencing player feelings, 156–158
    - level design principles for, 441–442
    - men vs. women, 85
    - player choosing level of, 412
    - UI design to show player, 260
  - Rochambeau, 408
  - Rock-paper-scissors (RPS) mechanism, 408–409
  - Role-playing game (RPG)
    - accuracy/precision challenges, 324
    - avatar construction/construction, 168, 183
    - character growth, 77, 201
    - cumulative influence, 223
    - defined, 521
    - in games that entertain, 26
    - as genre, 73–74
    - level design, 443
    - logistic challenges, 335
    - memory challenges, 329
    - moral decision-making, 161
    - nonlinear stories used in, 234
    - overview of, 176–177
    - plot, 229–230, 233
    - popularity with women, 86
  - Roles
    - character, 196–198
    - player, 131–132
  - Roll, virtual camera, 521
  - Rolls, defined, 271
  - Royalty, 114, 521
  - RTS (real-time strategy) games, 73, 334, 335
  - Rules
    - brainstorming, 128
    - challenges established by, 8
    - changing of, 10
    - conventional vs. video game, 13
    - defined, 1, 521
    - defining of goal, 5
    - fairness guaranteed by, 9–10, 412
    - as game element, 6–7
    - learning by trial and error, 13
    - specifying player actions, 9, 501
    - in strategic immersion, 20
    - symmetric vs. asymmetric games, 10–11
    - in toys, puzzles and games, 1–2
    - turning into core mechanics, 351–352
  - Rumble (vibration) feature, 288, 306
  - Runaway profit problem, 369
- ## S
- Safe games, 498
  - Sandbox mode, 175, 521
  - Sans serif fonts, 287
  - Save points, 460
  - Save slot, 345, 521
  - Saving games, 262, 343–347
  - Sawtooth difficulty progression, 424

- Scalar variable, 521
- Scale, physical space in game world, 142–144
- Scapple, 242
- Scavenger model, persistent worlds, 490
- Science fiction world, 51, 153–154
- Scissors-paper-stone, 408
- Scope, 465–466, 521
- Screen buttons, 256, 285
- Screen layout, 265, 269, 305
- Screen-oriented steering, 300–301
- Scripted conversations
  - benefits of, 245–246
  - defined, 521
  - designing using dialogue tree, 239–241
  - dialogue tree design issues, 241–245
  - overview of, 237–238
- Scripting engines, 458
- Scrivener, 242
- Scrum, 53, 522
- Sculptris, 195
- Secure telecommunications protocol, 483
- Security, online gaming technical, 482–484
- Self-centered approach, in player-centric design, 33–34
- Self-defining play, 167–171, 522
- Self-expression, 26, 86, 342
- Semiotics of games, 6
- Sensitive data, technical security for, 483–484
- Sensory feedback, with vibration, 288
- Sentence construction, of character, 203
- Sequence of play, 6
- Serial, 249, 522
- Serial numbers, packets, 483
- Serif fonts, 287
- Serious games, 27–28, 522
- Set-top boxes, 105
- “Seven Kisses of Death,” 90–92
- Sex
  - of avatar, 171
  - hypersexualized characters, 190–191
- Shadow costs, 407, 409, 522
- Shards, 497
- Sharing creations, 171
- Shell menus
  - customizing, 309
  - defined, 522
  - in UI design, 266
  - video game structure, 44
- Shoot-'em-up games, 69
- Shooter games
  - accuracy/precision challenges, 324
  - breaking new ground, 128
  - defined, 522
  - as genre, 69–70
  - level design, 443
  - popularity with men, 86
  - speed/reaction challenges, 324
  - subgenres, 68
- Shortcuts, 258
- Short-term memory, 258
- Shot clock, in basketball, 405
- Shoulder buttons, 297
- Side quest, 522
- Sidekicks, 194
- Side-scrolling perspective, 279, 302, 522
- Sightseeing, 342, 522
- Simple entity, 359, 522
- Simplicity, of core mechanics, 389
- Simplifying game, 267–269
- Simulation
  - construction and management, 76–77, 277
  - dating, 122
  - defined, 522
  - level design, 444
  - Monte Carlo, 396–397
  - serious games, 28
  - sports games, 74–75
  - theme parks, 112
  - using AI for people/creatures, 15
  - vehicle, 75–76

- Simultaneous atomic challenges, 319–321
- Single-player cooperative games, 482, 522
- Single-player games, 12, 27, 104, 159
- Single-screen, 2D display, 279
- Situational analysis, 334
- Skateboarding games, 74
- Skeletal tracking, Kinect, 299
- Skill, 404, 419
- Skill tree, 522
- Sliders, 298
- Small multiple indicator, 292, 522
- Small-integer numeric indicator, 292–293
- Smartphones, 298
- Social interaction
  - actions for, 342
  - in games that entertain, 26–27
  - managing chat, 494–496
  - online game problems, 494
  - online games among women, 85
  - online games for, 472
- Social interaction mechanics, 352, 383–386
- Social model, in persistent worlds, 490
- Software, 49, 342, 354
- Sound effects, 202–203, 287–288
- Sounds, 150–151
- Source, 367, 522
- Space
  - mechanics to progress through, 375–376
  - tactical maneuvering through, 378–383
- Spacecraft, 303
- Spatial awareness challenges, 330–331
- Spatial dimensions, physical space, 139–142
- Spatial immersion, 21
- Spawn point, 367, 460, 523
- Special effects, audio/visual, 450–451
- Specific avatars, 184–185
- Speed
  - context-sensitive models for high, 278
  - distortion for moving objects, 144
  - for mobility-impaired players, 307
  - physical coordination challenge of, 324
- Sponsored (commissioned) games, 120
- Sponsorships and advertising, 119–120
- Sports games
  - accuracy/precision challenges, 324
  - boundaries, 144
  - as genre, 74–75
  - level design, 444
  - sponsorship revenue in, 120
  - without game worlds, 137
- Sportsmanship, 118
- Sprints, Scrum management, 53
- Sprites, 271
- Stagnation, in unbalanced games, 433–434
- Stalemates, 404–405, 417, 430
- Stand-alone PC games, 108
- Static camera models, 39
- Static equilibrium, 373–374
- Status attributes, 169, 198, 523
- Stealth learning, 27, 335, 523
- Steering
  - accuracy/precision challenges, 324
  - avatar-oriented, 301–302
  - definition of, 300
  - screen-oriented, 300–301
- Stereotypes, avoiding, 204
- Stimulation, 82
- Stories
  - adventure games, 77
  - backstory, 149–150
  - at concept stage, 134–135
  - defined, 211, 523
  - in elaboration stage, 52
  - interactive, 212–214
  - in level progression document, 56

- player attitudes to, 83–84
    - presenting in UI, 37
    - progression, 452
    - requirements of good, 211
    - types of girl, 95
  - Storyboards, 55–56
  - Story-driven character design, 195
  - Storyline, 130
  - Storytelling
    - archetypal characters, 201–202
    - dramatic tension, 217–218
    - emergent narrative, 228–230
    - emotional limits of interactive stories, 235–237
    - endings, 230–232
    - episodic delivery games, 248–251
    - figuring out what you want to achieve, 209–210
    - frustrated author syndrome, 247
    - gameplay tension, 217–218
    - in games that entertain, 22–23
    - granularity, 232
    - interactive, 208
    - linear stories, 221–222
    - mechanisms for advancing plot, 233–235
    - narrative, 214–217
    - nonlinear stories, 222–227
    - overview of, 207
    - persistent worlds vs. ordinary games, 485–486
    - planning gameplay for level, 460
    - player attitudes to, 83–84
    - producing narrative immersion, 21
    - reasons to include story in games, 207–209
    - saving game affecting, 344
    - scripted conversations and dialogue trees, 237–246
    - story, 211–214
    - summary, 251–253
    - when to write story, 246–247
  - Storytelling engine, 37, 219–221, 523
  - Storytelling play, 177
  - Strategic challenges, 334
  - Strategic immersion, 20, 83
  - Strategy, 15, 404, 405, 523. *see also* dominant strategy
  - Strategy games, 72–73, 304, 443
  - Stress, 322–323, 451, 523
  - Structure of game, 40–45, 56, 523
  - Subgenres, 68, 73, 76
  - Sub-mission, 315
  - Subscription-based games, 115–116, 119, 251
  - Subtitles, for hearing-impaired players, 307
  - Superheros, 194
  - Survival, 335, 378
  - Survival horror genre
    - context-sensitive perspective in, 278
    - defined, 523
    - influencing player feelings, 156
    - players of, 83
    - rumble feature in, 288
  - Suspension of disbelief
    - defined, 523
    - as immersion, 20
    - in online gaming, 467, 475, 479, 498
    - scaling without harming, 142
  - Switch, for PvP combat justice, 498
  - Symbolic entities, 364
  - Symbolic indicators, 282–283
  - Symbolic relationships, 364–366
  - Symmetric games, 10–11, 413–414, 523
  - Synchronous online games. *see* online games, design issues
  - Synchronous play, 27, 523
  - Systematic thinking, games for children, 89
- ## T
- Tactical immersion, 20
  - Tactical maneuvering mechanics, 352, 378–383

- Tactics challenges, 334
- Tangible resources, 369–370, 524
- Target audience, 130, 133–134, 315
- Team roles, game design, 54–57
- Team-based competition mode, 12
- Technical issues, online gaming, 474–475
- Technical security, online gaming, 482–484
- Technology tree, 524
- Technology-driven games, 35–36, 524
- Teleportation, 139
- Teleporter, 332, 376, 524
- Temporal dimension, 146–148
- Temporary upgrade, 524
- Tension, dramatic vs. gameplay, 217–218
- Termination conditions
  - core mechanics detecting, 355
  - defined, 524
  - defined by rules, 6
  - as goal of game, 5–6
  - level design for, 440
  - planning gameplay for, 460
- Testing
  - for dominant strategies, 411
  - in elaboration stage, 52–53
  - every mechanic, 395
  - in level design process, 465
  - perceived difficulty, 424
  - UI prototype, 264
- Text, 40, 139, 286–287, 292
- Textures, prototype phase in level design, 462
- Third-person perspective, 70, 273–275, 288, 524
- Threat, 82
- Three-dimensional characters, 200
- Three-dimensional input devices, 292–294
- Tilt, virtual camera, 271, 524
- Tilting action, 292, 295–296
- Time, 146–148, 376, 491–493
- Time pressure, 17, 322–323, 325, 328–329
- Time-based subscription, mobile phone games, 111
- Tone, of physical surroundings, 151
- Tooltips, 283, 524
- Top-down perspective, 276, 283, 301
- Top-scrolling perspective, 279, 524
- Touch-sensitive devices, 296
- Tough characters, 188
- Toys, 1–2, 524
- Trackball, 296
- Tracking time and progress, 376–377
- Trader, 368–369, 525
- Traditional world markets, 121–122
- Training, serious games for, 27
- Transitive relationships, 405–407
- Transparency, 280–281
- Traps, in exploration challenges, 331
- Treatment document, 58–59, 525
- Trial and error learning, 13, 78, 91
- Triggers, 377
- Trivialities, avoiding, 434
- Truck, virtual camera, 271, 525
- Tuning stage, 54, 435–436, 525
- Turn-based vs. real-time games, 355–356, 479–480
- Tutorial levels
  - defined, 525
  - how women like to learn, 85
  - level design, 441
  - meeting atomic challenges, 317
  - overview of, 455–457
- Twine, 242
- Twinkie Denial Conditions, 468
- Twitch game/gaming, 304, 525
- Two-dimensional characters, 200
- Two-dimensional input devices, 294–296
- Two-player competitive mode, 12
- Typefaces, readable text, 286–287
- Typing text, social interaction, 472



**U**

- UI. *see* user interface (UI)
- Unbroken lines across space, 378
- Underground locations, 144
- Uniform distribution, 397–398
- Unique entity, 361, 525
- Unique selling points, 130, 525
- Units, 382–383, 409–410, 525
- Universal level design principles, 441–442
- Unlimited series, 248, 525
- Unmarked switches, 331
- Unstructured play, 342
- Upgrades, 118–119, 408, 525
- User experience, 255. *see also* user interface (UI)
- User interface (UI). *see also* camera models
  - accessibility issues, 304–308
  - audio elements, 287–290
  - complexity, 267–269
  - customizing, 308–309
  - defined, 525
  - design document, 60
  - design principles, 257–262
  - design process, 263–266
  - designer role, 55
  - in gameplay mode, 41
  - input devices, 290–299
  - interaction models, 39, 269–270
  - local multiplayer gameplay, 473
  - navigation, 300–304
  - overview of, 37–38
  - prototype, 264
  - storytelling engine and, 219–220
  - summary, 309–312
  - understanding, 255–256
  - visual elements, 280–287

**V**

- Values, character, 196–198
- Variable scrolling, 526
- Variable time, 146–147

- Vector variable, 526
- Vehicle simulations
  - 3D game world for, 141
  - gameplay in, 324–325
  - as genre, 75–76
  - level design, 444
  - sponsorship revenue in, 120
- Vehicles, 187, 262, 295–296
- Verisimilitude, 75–76, 148
- Vertical dimension, scaling, 143
- Vibration (rumble) feature, 288, 306
- Victory condition, 5–6, 317–319, 431, 526
- Video, for social interaction, 472
- Video gambling machines, 112
- Video game, 12–15, 526
- Violence, 85–86, 95, 161–162
- Virtual camera, 271, 526
- Vischeck website, 305–306
- Vision, 19, 315
- Vision-impaired players, 304–306
- Visual appearances of characters
  - clothing, weapons, symbolic objects, and names, 191–193
  - color palette/sidekicks, 194
  - physical types, 186–191
- Visual clues, pattern recognition, 330
- Visual cues, hearing-impaired players, 306
- Visual design, 90, 138
- Visual effects, 450
- Visual elements, UI, 256, 280–287
- Visual style, game world, 14, 152–153
- Vocabulary, character, 203
- Vocal quirks, character, 204
- Vocations, education/training games
  - for, 27
- Voice and language, 203–204
- Voiceover narration, 90, 290
- Volume controls, 109–110, 306
- Voting online, 174

**W**

- Walkthrough mode, 25, 83, 526

War games, 86, 319, 409–410  
Warning systems, online chats, 495  
Waypoints, 304  
Weapons, 69–70, 71, 191, 272  
Weather, 450  
Wii Motion Plus, 293  
Wii Remote, 292–294, 309  
Wildcard enemy, 526  
Windowed views, 280  
Wireless devices, 111  
Women, games for, 84–88, 98–99, 100  
World builder role, 55  
World design document, 60

World markets, 121–123, 189  
World models, for persistent world,  
490–491  
World-oriented map, 284  
Writers, 56, 64, 290

## X

Xbox console, 298–299  
XP. *see* experience points (XP)

## Z

Zero-dimensional characters, 199