GAMES, DESIGN and PLAY

A DETAILED APPROACH TO ITERATIVE GAME DESIGN

Colleen **MACKLIN** | John **SHARP**

FREE SAMPLE CHAPTER

Praise for *Games, Design and Play*

"Sharp and Macklin break down the design process in detail from concept to code to completion. What I particularly like about this book is its inclusion of prototyping methods and design patterns that are often overlooked by others. I suspect it will be helpful to designers looking to break new ground outside the AAA space."

—Brenda Romero, Game Designer, Romero Games

"There are many books you can read about games. But *Games, Design, and Play* is something new. Colleen Macklin and John Sharp don't just explain what games are—they detail the game design process itself."

—Eric Zimmerman, Game Designer & Arts Professor, NYU Game Center

"*Game, Design and Play* is a detailed, thoughtful, and well-researched primer on the multifaceted discipline that is game design."

—Mare Sheppard, President, Metanet Software

"I've been studying and teaching game design for over a decade and this is the first time I've read a book that catalogs so many diverse aspects of the game design process. Colleen and John dissect and examine games of all types (not just videogames) and then expertly show you how to put all the pieces together to form your own unique design."

—Stone Librande, Lead Designer, Riot Games

"The authors share a wealth of experience, making for a text full of great concepts, thorough process and applied practice. Throughout they provide pertinent examples and use engaging exercises which makes it useful, informative and insightful."

—Drew Davidson, Director and Teaching Professor, Entertainment Technology Center, Carnegie Mellon University

"This is a book that fills the much needed space between systems thinking and play theory. Macklin and Sharp balance the process with practicalities, in a way that is as timeless, enjoyable and engaging as the games they discuss."

—Lindsay Grace, Associate Professor and Founding Director, American University Game Lab and Studio

"Anyone who seeks to learn or teach about games can use *Games, Design and Play* as an insightful guide to ideas on how games work, methodologies that help us create new experiences, and pleasures found through play. Macklin and Sharp don't seek to restrictively define games or prescribe narrow rules of design. Instead, their text offers a comprehensible yet flexible framework for understanding games and play alongside practical processes for imagining, prototyping, collaborating, and iterating during game development. The approaches described in *Games, Design and Play* are applicable to digital, analog, and hybrid games, and thoroughly illustrated with examples from projects by small teams or individuals. In a time when even large studios find value in fostering small, agile teams, this kind of practical, beginning-to-end handbook to creative development is invaluable."

—Naomi Clark, Assistant Arts Professor, NYU Game Center and Author of
A Game Design Vocabulary

"This is one of the most comprehensive game design books to date. It coalesces academic insights for helpful ways to think about games and play, and guides the reader from scratch to production with thorough advice and best practices drawn from examples of recent, cutting edge independent games. I wish I had a text like this available to me when I was first starting out in my career—it would have made it much easier to come up with a framework for some of the more outlandish ideas I had for games and to communicate them to my teammates."

—Anna Kipnis, Senior Gameplay Programmer, Double Fine Productions

"Colleen Macklin and John Sharp deliver an impressive conceptual and methodological approach to designing and producing games. Perhaps most importantly, *Games, Design and Play* delivers a message to designers that their games will go out into the world and be part of society and culture. The approach is both rich and approachable for undergraduate, graduate and aspiring game developers alike."

—Casey O'Donnell, Associate Professor, Michigan State University and Author of
Developer's Dilemma

"If for some reason you've decided on a career in game development, you could do a lot worse than Macklin and Sharp's book. While most texts on game design float in a vague sea of buzzwords and nostalgia, *Games, Design and Play* is rooted in example after example of real work being done by real game artists. Books on game-making tend to fixate on the technical "how to," GD&P dabbles in the far more essential 'why to.'"

—anna anthropy, Play Designer, Sorry Not Sorry Games

Games, Design and Play

A Detailed Approach to Iterative Game Design

Colleen Macklin
John Sharp

Contents at a Glance

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Contents

Preface

Games, Design and Play is a book that goes from a foundation in game design concepts to the roll-your-sleeves-up work of actually designing a game. With examples drawn from independently produced games, it's also a window into the process and thinking of actual game designers working to further what games can do and express. It's an exciting time in videogames—and this book is your key to getting involved!

We're Colleen Macklin and John Sharp, two game designers and educators. This book is a distillation of all we have learned from designing games, from the lessons of other game designers, and from the games we've played and studied. *Games, Design and Play* also draws on our experiences in other creative fields—DJing, VJing, graphic design, interaction design, photography, even teaching. We've developed and honed an approach to understanding games, play, and game design over our combined 35 years of design and teaching experience, and we have worked hard to capture it here.

Another Book on Game Design?

You might ask, "How is this book different from some of the other game design books out there?" Indeed, there already are some very good books, and we've been inspired by many of them. Our play-oriented approach is very much in line with Tracy Fullerton's *Game Design Workshop*,[1] and we have learned much from Katie Salen and Eric Zimmerman's seminal game design book, *Rules of Play*.[2] anna anthropy and Naomi Clark's *A Game Design Vocabulary*[3] influenced our approach to examples, not to mention the influence their work as game designers and critics has on us.

Even with all these great resources, we still found a gap. The primary thing that *Games, Design and Play* does differently is in the details—literally. Many game design books are fairly high level, considering games and game design primarily from an abstract point of view. Or they describe an overall game design methodology but don't get into the details of game design and the play experiences game designers create. Still other game design books approach videogames from a computer-science perspective, using games as a frame for learning game programming but skipping over the details of the design and playtesting process.

Games, Design and Play differs in that it connects the conceptual and design considerations of games with the process of actually designing a videogame from start to finish, from idea to

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1   Tracy Fullerton, *Game Design Workshop*. 3rd edition, 2014.

2   Katie Salen and Eric Zimmerman, *Rules of Play*, 2003.

3   anna anthropy and Naomi Clark, *A Game Design Vocabulary: Exploring the Foundational Principles Behind Good Game Design*, 2014.

prototype to playtest and finally, a fully realized design. To put it another way, *Games, Design and Play* is a practitioner's guide to designing games. It looks closely at games, identifies how games work, and shows you how to design one from idea to fully realized game.

Game Design, Game Development, and Game Production

While *Games, Design and Play* is a book that takes you through the details of game design, there are certain things we left out—namely, game development. This is a game design book, not a game development book. What's the difference? **Game design** is the practice of conceiving of and creating the way a game works, including the core actions, themes, and most importantly, the game's play experience. Game design requires an understanding of different kinds of games, how they work, and the processes game designers use to create them.

Game development, on the other hand, encompasses the creation of the game, including game design, programming, art production, writing, sound design, level design, producing, testing, marketing, business development, and more. These activities might correspond to roles on larger game development teams, or in an independently made game, they might be undertaken by one person or a small team. In this light, we will not be addressing programming, modeling, animating, music scores, or any other aspect of videogame development except as they relate to game design. There are already some very good books that show you how to program games, including Jeremy Gibson Bond's *Introduction to Game Design, Prototyping, and Development*.[4] We also will show some bits of the art production process, but not how to use art and animation production tools like Photoshop and Maya. There are some great resources out there for that, too, including The Gnomon Workshop's video tutorials[5] and books such as *Drawing Basics and Video Game Art*[6] by Chris Solarski and Paul Wells' *Understanding Animation*.[7] For sound design and production, we would highly recommend Michael Sweet's *Writing Interactive Music for Video Games: A Composer's Guide*.[8]

An important distinction to also make here is the difference between design and production. *Games, Design and Play* is a detailed set of principles and processes for understanding and designing games, but it only scratches the surface of the production processes that happen once a game's design is complete. The relationship between architecture and construction is a useful comparison. Architects design buildings, but they do not build them. The building

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4   Jeremy Bond Gibson, *Introduction to Game Design, Prototyping and Development*, 2014.

5   The Gnomon Workshop, www.thegnomonworkshop.com/.

6   Chris Solarski, *Drawing Basics and Video Game Art*, 2012.

7   Paul Wells, *Understanding Animation*, 1998.

8   Michael Sweet, *Writing Interactive Music for Video Games: A Composer's Guide*, 2014.

process is handled by engineers and construction crews. Construction can't happen, or at least can't happen smoothly, until the building is designed. The same goes for games—they need to be designed before they can be produced. **Game production** is then the process of producing the game indicated by the game's design. As you work through the book and the iterative game design methodology in Part III, "Practice," you will encounter some of the important aspects of production, but we don't go into anywhere near as much detail as we do on conceptualizing, prototyping, playtesting, and evaluating a game's design. As we mentioned earlier, there are many good resources and tutorials out there for code, art production, and sound, and often, in the production of your game, you will find solutions to specific production problems by simply searching for them online.

Games By and For Everyone

Another important thing about this book: most of our examples come from independently produced games made by small teams or individuals with goals ranging from the commercial to the artistic. We focus on indie games for a number of reasons. For one, these are often the most interesting and diverse games. The scale of these games is also more realistic for individuals and small teams. Changes in distribution and marketing over the past decade have made it possible for individuals and small teams to create and release games. On a personal level, we're both involved in the independent games community and have been for nearly a decade, so indie games are what we know and love. Perhaps most important, these are the kinds of games we make and play. The games we have made fit that category and include everything from cardgames and sports to iPhone word puzzle games and experimental arcade games.

Videogames are often organized into genres—platformers, shooters, sports simulations, massively multiplayer online (MMOs), role-playing games (RPGs), and so on. While we all enjoy particular genres, it isn't how we like to begin the design of our games. Genres can limit thinking, leading us to think in terms of what play experiences we want to borrow or improve instead of the play experiences we want to provide our players. Instead of focusing on the kinds of play, genre tends to focus thinking on other games in the same genre. We become hide-bound to the conventions, which keeps us from thinking more inventively about play. This is why there are so many indie platformers, stealth games, and mobile physics puzzle games: we allow ourselves to get caught in genre traps. In this book, we prefer to think about the kinds of play, not games circumscribed by genre.

This doesn't mean that what you learn from this book can't be applied in large-scale game industry context. However, this aspect of game development is often beholden to licensed content, sequels, and genres that have become increasingly predictable. *Games, Design and Play* hopes to show another path for gamemaking and provides a process that is play focused, not product oriented. This may seem like a subtle distinction, but it's the key to creating game experiences that focus on the act of play, unburdened from what a game normally is or is expected to be. Does this mean that we think all AAA games are bad? Definitely not.

Some break the mold, and many are a lot of fun to play. But we also think that as videogames continue to grow and mature as a medium, it's important to keep experimenting, trying new things, and pushing the boundaries.

You Are What You Play

This book is written from the perspective that games are an exciting art form with a wide array of styles, forms, and messages. We're interested in games by and for everyone, not tied to a particular platform or console—games that are digital, nondigital, and everything in-between. One reason for focusing on all forms of games is that from a design standpoint, there's much to learn and apply between different kinds of games. Physical sports can inspire videogames, and so can cardgames, boardgames, and playground games like hide and seek and tag. And it's a two-way street: videogames can inspire nondigital game designs, too. The more kinds of games we play, the more we learn and can apply to our own ideas.

One of the first things you will notice about this book is the emphasis on play and play experiences. In fact, throughout the book we use *gameplay* and *play experience* interchangeably. We do this to challenge our mind-set about games. Instead of focusing on the idea that we are designing games, we prefer to think about designing opportunities for play. By *play*, we mean the thinking and actions that emerge when we engage with games. Or, we mean the ways in which we engage with each other through the rules of the game—devising creative strategies and solutions to the problems games create for us, or enjoying the intersections of player participation and the game's images, sounds, and story. So in this book, we prioritize play as the primary experience our games provide. We also think this is a really good way to break out of expected genres and styles of games. By focusing on designing play instead of designing a game, we can choose many different approaches to take us there. We believe that thinking like this helps us create better and more interesting play experiences for our players. We'll explore and expand on this throughout the book.

How This Book Works

We wanted to write a game design book that guides you through the entire process of designing a videogame. When we teach an introductory game design class—whether to our college students or young people through the various curricula we've designed—we see how challenging it is to learn all of the important concepts of games, from rules to goals to feedback systems. Designing videogames adds a whole new set of challenges, from coming up with an initial concept to creating the rules and goals of the game to communicate your ideas, to testing and refining your design until it's solid. But these concepts and skills are all the nuts and bolts we need to design play experiences. So, we've set out to include all of the parts we think you'll need to design a game from start to finish.

Games, Design and Play is divided into three parts: Part I, "Concepts," Part II, "Process," and Part III, "Practice." Part I takes you through the definitions and principles of a play-based approach to game design. By the end of Part I, you will have the terminology and conceptual framework for understanding games and play from a game designer's point of view. The chapters in Part I include the following:

- Chapter 1, "Games, Design and Play," explores the component parts of games and considers how game designers use them to create play experiences.
- Chapter 2, "Basic Game Design Tools," looks more deeply at the foundational principles of game design.
- Chapter 3, "The Kinds of Play," examines the kinds of play games provide.
- Chapter 4, "The Player Experience," considers how players learn and come to understand a videogame and what it is asking of them.

Part II, "Process," steps outside the concepts of game design and looks at some of the core processes and techniques through which the iterative game design process unfolds. These chapters introduce important methods and documents that will make the game design process smoother and more enjoyable. The chapters in Part II include the following:

- Chapter 5, "The Iterative Game Design Process," provides a quick overview of the game design process.
- Chapter 6, "Design Values," introduces an important tool for guiding a game's design through the iterative process, including three case studies showing how design values can guide a game's design.
- Chapter 7, "Game Design Documentation," looks at the three main documentation tools of game design: the design document, schematics, and tracking spreadsheets.
- Chapter 8, "Collaboration and Teamwork," covers the often-overlooked but important considerations of collaborative projects, including team agreements, and considerations for resolving team conflicts.

Part III, "Practice," then puts game design into action. The chapters move through the iterative game design process of conceptualizing, prototyping, playtesting, and evaluating the design of games as play machines. The chapters in Part III include the following:

- Chapter 9, "Conceptualizing Your Game," details techniques for exploring and establishing ideas for a game's design, including a number of brainstorming methods and considerations for capturing the designer's motivations for creating a game.
- Chapter 10, "Prototyping Your Game," moves into the intentions and approaches to giving form to game design ideas through prototypes.
- Chapter 11, "Playtesting Your Game," considers the role of playtesting and lays out a series of approaches to playtesting prototypes of a game's design.

- Chapter 12, "Evaluating Your Game," establishes the importance of reflection on the results of playtests and provides a methodology for making the most of playtesting feedback to improve a game's design.

- Chapter 13, "Moving from Design to Production," outlines a means of determining when a game's design is complete and looks at a series of case studies that approach iterative game design in different ways.

Like our teaching, this book takes the old adage, "learn the rules before you break them," to heart. By focusing on a broad understanding of what games, play, and design can be, those familiar with basic iterative processes will likely see familiar patterns. We believe the best way to expand a discipline is by first mastering its foundational principles. So we use the best practices we've learned as designers and educators to show a tried-and-true path through the design of play experiences. And as you master them, you'll likely want to tweak the process in small and large ways. This is to be expected—we look forward to hearing how you have refined and revised the principles, processes, and practices presented here.

The Beginning of Something

If this is your first time designing a game, we welcome you to what we think is one of the most exciting creative practices around. Game design is challenging, but it's all worth it when you see your game being played and enjoyed by people. If you've made games already, we hope this book offers inspiration and some new ways to do things. And for teachers, we hope that it is a useful addition to your classroom. It's been playtested in ours and we're happy with the results. We hope you are, too. So let's begin.

John Sharp and Colleen Macklin
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About the Authors

Colleen Macklin is a game designer, interactive artist, and educator. Much of her work focuses on social change and learning and the potential of play for both.

John Sharp is a game designer, graphic designer, art historian, educator, and curator. He makes games, teaches game and interaction design, and researches and writes about games, design, art, and play.

Together, they are associate professors in the School of Art, Media, and Technology at Parsons School of Design at The New School where they codirect PETLab (Prototyping, Education, and Technology Lab), a research group focused on games and game design as forms of social discourse. Along with Eric Zimmerman, Colleen and John are members of the game design collective Local No. 12, which makes games out of culture.

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PART II

PROCESS

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DESIGN VALUES

Most simply stated, design values are the qualities and characteristics a game's designer wants to embody in the game and its play experience. Design values help designers identify what kind of play experience they want to create and articulate some of the parts that will help their game generate that experience.

Designing games can be challenging in large part because of the way games work. Game designers have many reasons for creating games. Sometimes they want to share a certain kind of play. Sometimes they have ideas that are best expressed through a game. Regardless of the reasons, being able to fully realize the goals you have for a game can be difficult. This is because of the second-order design problem we discussed in Chapter 1, "Games, Design and Play;" the designer doesn't have direct control of how players will play; instead, they simply define the parameters within which players play.

One of the best tools to guide the creation of play experiences is **design values**, a concept we borrow from the scholar Ivar Holm[1] and the game designers Eric Zimmerman and Mary Flanagan. The term value here isn't referring to the financial worth of the game. Instead, design values are the qualities and characteristics you want to embody in a game. This can reflect your own goals as a creator, but also the experience you want your audience to have.

The broadest conception of design values is found in Ivar Holm's work with architecture and industrial design. Holm identifies five key approaches: aesthetic, social, environmental, traditional, and gender based.

- *Aesthetic:* Aesthetic design values focus on the form and experience.
- *Social:* Social design values focus on social change and the betterment of society.
- *Environmental:* Environmental design values address the concerns of the environment and sustainability. This has more obvious application to architecture and product design, but is also of importance to games.
- *Traditional:* Traditional design values use history and region as inspiration. In the context of architecture, this might apply to restoring a building to its original state or building in the local, traditional style. For game design, this might involve working within a genre, or reviving a historically important game.
- *Gender based:* Gender-based design values bring feminist conceptions of gender equality into the design process.

The first game-specific conception of design values comes from Eric Zimmerman's "play values," which he describes as "the abstract principles that the game design would embody."[2] At times, this sort of design value relates directly to the "mechanical" nature of the game and its play—the actions players perform, the objects used, the goal of the game, and so on. Sometimes design values are adjectives like fast and long and twitchy—descriptions of what the game will feel like while playing. Other times design values refer to the "look and feel" of

1   Holm, Ivar. *Ideas and Beliefs in Architecture and Industrial Design: How Attitudes, Orientations, and Underlying Assumptions Shape the Built Environment.* Oslo School of Architecture and Design, 2006.

2   Although Zimmerman uses the term "play values," our conception of design values is very much based on this idea. "Play as Research: The Iterative Design Process" www.ericzimmerman.com/texts/Iterative_Design.html.

the game. Sometimes design values are more about the kind of player the designer envisions playing their game in the first place. Other times, design values are reminders of context—the location the game is to be played, the technological parameters of the platform, and so on. These fit within Holm's aesthetic and traditional design values.

In addition to the kind of play experience the designer wants to create, design values can be derived from different personal, political, or cultural values as well—in other words, social design values. Social design values might reflect a desire to express an idea about the human condition, an experience the designer once had and how it felt, or a political position based on personal or collective values. A good example of this notion of design values as an embodiment of political, feminist, and personal values comes from Mary Flanagan and Helen Nissenbaum's project and book *Values at Play*.[3] Flanagan and Nissenbaum developed a framework and toolkit for identifying political, social, and ethical values in games and exploring how designers might express their own perspectives. These connect to Holm's social and gender design values but can as well extend to the environmental if we frame it more broadly.

Generating Design Values

Creating design values is a process of determining what is important about the game—the play experience it provides, who it is for, the meaning it produces for its players, the constraints within which it must be created, and so on. We've found the best way to get started is with a series of questions that explore the who, what, why, where, and when of a game. While not every game begins with all of these, the following are the general questions to discuss while establishing the design values for a game.

- *Experience:* What does the player do when playing? As game designer and educator Tracy Fullerton puts it, what does the player get to do? And how does this make the player feel physically and emotionally?
- *Theme:* What is the game about? How does it present this to players? What concepts, perspectives, or experiences might the player encounter during play? How are these delivered? Through story? Systems modeling? Metaphor?
- *Point of view:* What does the player see, hear, or feel? From what cultural reference point? How are the game and the information within it represented? Simple graphics? Stylized geometric shapes? Highly detailed models?
- *Challenge:* What kind of challenges does the game present? Mental challenge? Physical challenge? Or is it more a question of a challenging perspective, subject or theme?
- *Decision-making:* How and where do players make decisions? How are decisions presented?

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3   Mary Flanagan and Helen Nissenbaum, *Values at Play in Digital Games*, 2014.

- *Skill, strategy, chance, and uncertainty:* What skills does the game ask of the player? Is the development of strategy important to a fulfilling play experience? Does chance factor into the game? From what sources does uncertainty develop?

- *Context:* Who is the player? Where are they encountering the game? How did they find out about it? When are they playing it? Why are they playing it?

- *Emotions:* What emotions might the game create in players?

This may seem like a lot to think about before designing a game. And it *is* a lot. But all these are important factors to consider at the beginning of the design process for a number of reasons. For one, design values establish the overarching concept, goals, and "flavor" of a game.

Just as important is the way design values create a shared understanding of the game. Most games are made collaboratively, and everyone on the team is likely to have opinions and ideas about what the game is and what its play experience should be. Design values allow the team members to agree on what they are making and why they are doing it. They also are an important check-in when great ideas come up but might not fit the game's design values. Continuing to ask, "does this fit our design values?" will help resolve team conflicts, and, even if it's a great idea, know whether it should be included in this game or a future project.

Example: Pong Design Values

Having examples to draw from can be really helpful, particularly when exploring a new idea or concept—that's why Part I, "Concepts," is filled with examples drawn from games. Now that we're moving from basic concepts into the design process, we're going to use a speculative design example to illustrate things—*Pong* (see Figure 6.1). We're going to pretend like we're designing the classic arcade game. To start, the design values are the following:

- *Experience: Pong* is a two-player game based on a mashup between the physical games of tennis and ping pong. It uses a simple scoring system, allowing players to focus on competing for the best score.

- *Theme:* Sportsball! Head to head competition!

- *Point of view: Pong* is presented from a top-down perspective, which takes the challenge of modeling gravity and hitting the ball over the net away from gameplay—focusing on the act of hitting the ball back and forth and trying to get it past your opponent's paddle. The graphics are simple and abstract, also keeping the focus on fast and responsive gameplay.

- *Challenge:* The game's challenge is one of speed, eye-hand coordination, and hitting the ball in ways that your opponent is not expecting.

- *Decision-making:* Decisions are made in real time, with a clear view of the ball's trajectory and your opponent's paddle.

- *Skill, strategy, chance, and uncertainty: Pong* is a game of skill, with some chance related to the angle of the ball when it is served and some uncertainty of how your opponent will hit the ball and thus in how you will counter.

- *Context:* The game is played in an arcade context, with your opponent next to you, enabling interaction on the game screen and in the real world.

- *Emotions: Pong* is meant to generate the feeling of being completely focused, grace, intense competition, and excitement.

Figure 6.1 *Pong.* Photo by Rob Boudon, used under Creative Commons Attribution 2.0 Generic license.

Case Studies

To help see how design values play out in real-world examples, following are three real-world case studies: thatgamecompany's *Journey*, Captain Game's *Desert Golfing*, and Naomi Clark's Consentacle.[4]

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4   John writes about additional examples (including the writing of this book) in his essay "Design Values." www.heyimjohn.com/design-values.

Case Study 1: thatgamecompany's *Journey*

thatgamecompany's *Journey* (see Figure 6.2) was an idea Jenova Chen, the company's cofounder and creative director, had during his time as a student in the University of California's Interactive Media and Games Division MFA program. He had been playing a lot of Massively Multiplayer Online games (MMOs) but was increasingly dissatisfied with the inability to really connect with other players on a human, emotional level. At the time, well before thatgamecompany formed, the game concept was beyond his abilities to pull off on his own. Years later, after thatgamecompany had *Flow* and *Flower* under its belt, Jenova thought it might be time to take on the challenges of *Journey*.

Figure 6.2   *Journey.*

In his talk at the 2013 Game Developer's Conference about designing *Journey*, Jenova described the goal of designing a game that makes the player feel "lonely, small, and with a great sense of awe."[5] This was a design value: make a game that generates this kind of feeling in the player.

Jenova also wanted the game to involve multiplayer collaboration (in the case of *Journey*, two players). This led to a second design value for the game—being able to share the emotional response with another player and to have that act of sharing heighten the overall emotional impact.

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5   For more, see Jenova Chen's Game Developer's Conference 2013 talk, "Designing Journey." www.gdcvault.com/play/1017700/Designing.

In addition to these initial interests, the game's design is informed by where it is played. *Journey's* design values were influenced by the fact that it was being made for the PlayStation 3. Sony asked thatgamecompany to make a single-player game, which influenced how the cooperative mechanic was implemented. It's seamless, and the experience doesn't actually rely on other players being online and playing with you. Players appear and disappear as a natural occurrence in the world. And, of course, a game created to be experienced in your living room is going to be more cinematic and immersive than a game you might play on your phone while waiting for the bus, so the PlayStation platform informed the visual style and gameplay.

Another design value for *Journey* relates to the emotional and narrative arc of the play experience. Jenova was inspired by Joseph Campbell's work on the Hero's Journey, which builds upon the three-act structure common to theater and film. Jenova and his team began by creating a landscape that literally and emotionally tracked the arc of a traditional three-act narrative. This was intended to create an emotional flow from the highs of players sensing freedom, awe, and connections to the lows of being trapped, scared, and alone, and finally, closure through resolution.

During the design process, the design team went to visit sand dunes for inspiration for the game's environment. While there, they noticed how enjoyable it was to move through the sand, climbing a tall dune and experiencing the anticipation of seeing what was at the top. This led to the idea of sliding in the sand, moving up and down the dunes with grace. This action fed well into the initial design value of creating a sense of awe as you move through the environments, and creating experiences that felt realistic—yet better than reality. Because on a real sand dune, unless you have a sled, it's not really possible to slide down them—but in *Journey*, you surf the sand as if it were a wave (see Figure 6.3).

Figure 6.3 The player character sliding in the sand of *Journey*.

To achieve all these goals, Jenova and the thatgamecompany team had to work through a number of problems around player expectations and the conventions of multiplayer gameplay. In early prototypes, the game included puzzles involving pushing boulders together, or players pulling one another over obstacles.[6] The goal was to create a multiplayer environment that encouraged collaboration. However, while playtesting, the team observed players pushing one another and fighting over resources. They soon realized that the kinds of actions allowed in the game and the feedback players were getting were all working against the collaborative spirit they were hoping to encourage. So they devised a solution that led to players being able to complete the journey alone as well as together, have equal access to resources, and have little effect on the other player's ability to enjoy the game. And when players tended to use the in-game chat to bully or otherwise act in unsociable ways, the team had to make some difficult decisions about how to support player communication without allowing players to treat one another badly. This meant removing "chat" and replacing it with a single, signature tone. All of these decisions were informed by the design values of meaningful connection and a sense of awe.

Having the design values for the game allowed the team to remain focused on its goals and understand what they were aiming for as they developed prototypes. It took a good number of cycles through the iterative process to get the game to meet its design values and the goals initially set by Jenova. This was in large part because he wanted to do things that differed from most other games—there wasn't a set formula or a precedent to work from. And so he and the thatgamecompany team had to experiment and try things out to craft, refine, and clarify the *Journey* player experience, and as they went, revisit their design values to make sure they were staying true to the team's goals. In the end, all of the hard work paid off. *Journey* went on to win many awards, including The Game Developer's Choice award for best game of the year.

Case Study 2: Captain Game's *Desert Golfing*

Desert Golfing (see Figure 6.4) is a deceptively simple game: using the tried-and-true *Angry Birds*-style "tap, pull, aim, and release" action, players hit a ball through a desert golf course of 3,000 (or more) holes. The game is deeply minimal in all ways: a single action for achieving a single goal (get the ball in the hole), yielding a single score (the total number of strokes) over an enormous number of holes, all with spare, flat color graphics and minimalist sound effects.

Desert Golfing began with a simple idea: make an "indie *Angry Birds*." For Justin Smith, the game's designer, this was shorthand for keeping all the pleasurable aspects of the "pinball stopper" action of *Angry Birds*, while removing a lot of the extraneous details that he felt detracted from the potential of this action. This was the first and primary design value for the game. It meant keeping the gameplay minimal, which kept a clear focus on the core action.

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6   Jenova Chen and Robin Hunicke, IndieCade 2010: "Discovering Multiplayer Dynamics in Journey Parts 1–4." https://www.youtube.com/watch?v=0BLoTk6cmWk.
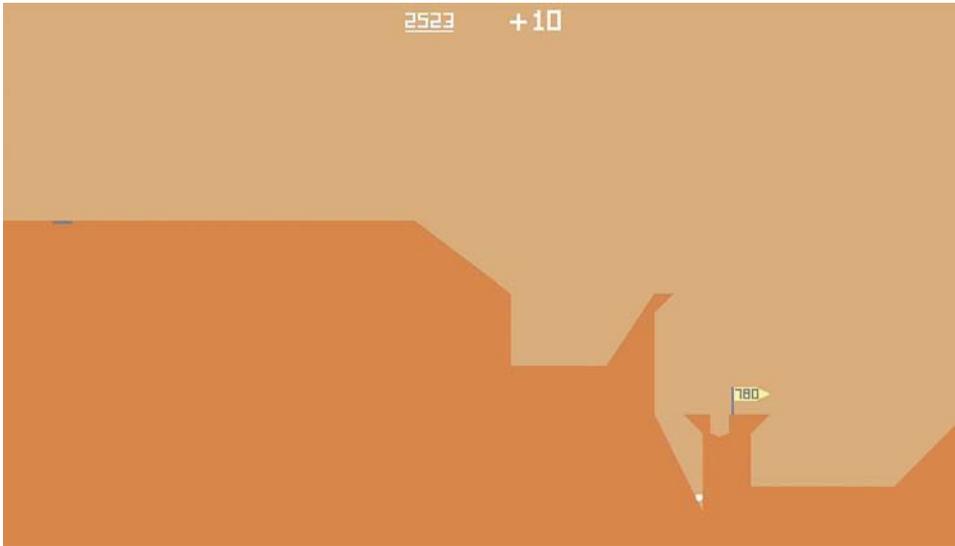
Figure 6.4   Captain Game's *Desert Golfing*.

Justin describes his design approach as "asynchronous"—he collects ideas in a notebook (jotting down things like "indie *Angry Birds*") and then when ready to work on a game, he flips through his notes to find ideas that connect. Justin always had an interest in sports games, and golf games in particular, which happened to lend itself well to the "pinball stopper" action. The interest in golf led to a thought experiment in which Justin imagined putting a golf game on top of thatgame-company's *Journey*. Though he didn't do that, it did inspire the color palette and environment of the game. This provided the next design value: the characteristics of the game's world.

Justin also thought about the minimum play experience and wanted players to be able to have a satisfying play session that was as small as a single stroke of the ball. This created the third design value: a deeply satisfying and discrete sense of pleasure from each action. This put a lot of importance on the "pinball stopper" action—the way it felt and how much nuance players could get from a simple gesture. Justin had to tinker with the responsiveness of the pull-and-release gesture, how feedback was visualized, and how the sound effects supported players' understanding of what they did.

Knowing he wanted a golf game, Justin thought about how he might generate the holes. He was much more interested and attuned to procedurally generating the holes with code than manually designing them. This led to the idea of creating a seemingly endless golf course in a desert and a fourth design value: a sense of infiniteness to the game. To achieve this, Justin had to develop a set of more concrete rules to procedurally generate the first 3,000 holes of the game. This came through a series of trial-and-error experiments as he moved through iterative cycles of generating levels, evaluating the results, and making changes to the rules controlling the golf hole generation.

The final design value related to how players shared their *Desert Golfing* play experiences. He wanted to allow players to organically find things they wanted to share and discover about the game. This led to a couple of things. One was the gradual shifting color palette. It created a sense of discovery that players wanted to share with one another. Similarly was a player's stroke total. Instead of creating leaderboards that would drive competition, Justin left it to players to find ways to share their scores. This led players to talk about this in person and through social media.

Desert Golfing is a great example of how design values can develop over time. Keeping a notebook for ideas and then returning to those ideas can begin the process of forming design values for a game, even from a simple notion, like an action or a setting inspired from another game. Justin Smith's process of establishing design values was also influenced by the things he was interested in trying, such as the procedural generation of each level. Ultimately, design values are highly personal, based on choices about what you want the player experience to be and what you are interested in exploring as a designer.

Case Study 3: Naomi Clark's Consentacle

Naomi Clark's cardgame Consentacle (see Figure 6.5) is an example of a game created in response to the designer's experiences with other media and playing other games. Consentacle grew out of a dissatisfaction with a particular strain of animé—Hentai, a genre notable for sexual acts that are often nonconsensual and violently portrayed, between tentacled monsters and young women. The traditions of the genre had the monsters in the position of power. Naomi wondered what might happen if she created a game in which both characters had equal power. The idea of a game where characters have equal power and engage in consensual activities formed the core design value for Consentacle, one that manifests in how the game is played, but also its politics.

Figure 6.5   Naomi Clark's Consentacle.

There was one other thing from Hentai that Naomi drew inspiration from: the idea of developing alternative genders—the tentacled monster's gender was ambiguous in Hentai animé. Naomi thought this worked as a perfect metaphor for queering gender, though at first she wasn't exactly sure what form it would take. Together, these provided the theme of Consentacle, which is a strong guiding form of design value: finding ways to embed or express a theme through a game's play.

With these ideas tucked away for a future project, Naomi began playing Android: Netrunner. Thanks to fellow game designer Mattie Brice, Naomi noticed that if you approached Android: Netrunner as a role-playing game, there was an intimacy to the interactions between the Corporation and the Runner. The Corporation was always vulnerable to the Runners, who in turn were continuously probing to gain information and points. It reminded Naomi of the dynamics of her game idea, Consentacle, so she decided to use this as a point of reference. This led to the second design value: exploring the inherent intimacy of collectible card game economic systems as a system for emotional engagement.

Naomi realized that a good deal of the intimacy came from the interactions around imperfect information spaces—the Corporation always had hidden information that the Runner had to think about and try to learn. Naomi began looking around for other cardgames and boardgames that used hidden information in similarly intimate ways. She began playing Antoine Bauza's Hanabi (see Figure 6.6), a cardgame in which players can see one another's cards, but

Figure 6.6   Antoine Bauza's Hanabi.

not their own. In Hanabi, players must collaborate to help one another make the right decisions. This led Naomi to her next design value: collaborative gameplay as an exploration of consensual decision-making.

With these components in place, Naomi quickly conceived of the basic play experience of Consentacle. Players—one a human, the other a tentacled alien—work together to build trust, which leads to satisfaction. This is done by simultaneously playing a card that, when combined, describes actions players can make around the collection of trust tokens and satisfaction tokens. In the beginner's version of the game, the players can discuss which cards they will play, but in the advanced version, they are not allowed to talk and must develop alternate means of communicating with one another.

With constraint being a big part of a game designer's toolkit, Naomi began to think about ways she could constrain the player's ability to collaborate in a fun way. This led Naomi to think about the ways players could work together without regular communication. She came up with the idea of using what she calls "collaborative yomi"—players trying to guess one another's actions in order to help one another, instead of the normal understanding of yomi as trying to best one another in a competition. This was the third design value for the game.

Because the game was seeking to encourage collaboration, Naomi decided fairly early on that she didn't want the game to have an absolute win/lose condition. This was the fourth design value for the game. With this in mind, Naomi began thinking about ways to give players feedback on how they did without declaring a winner or loser (which would push against the collaborative nature of the game). Naomi took inspiration from the quizzes in *Cosmopolitan* magazine that rate along a scale. So the game used a scale to evaluate the collaborative score as well as the spread of points earned by the two players.

Consentacle's unique gameplay is crafted around a set of design values reflecting real-world issues around consent. As she developed Consentacle, Naomi looked to games and other forms of media to provide insights into the design process, leading to interesting and ultimately unique solutions. Throughout the process, the design values in the game led Naomi's research. This is important—it is easy to get lost looking at other games and media for influence—but if you have a strong set of design values, your search will have direction and purpose.

Summary

As you can see from our *Pong* thought experiment and the three case studies, design values are helpful in guiding the design process. They are guideposts in the journey through a game's design. This is important because as you create your game and test it with others, you need a goal to work toward. Design values can also answer many of the questions that arise in the process of making a game. They function as tools for calibrating the team's understanding of the game they hope to create, and they keep everyone working toward a unified play experience.

Here are the basic questions of design values:

- *Experience:* What does the player do when playing? As game designer and educator Tracy Fullerton puts it, what does the player get to do? And how does this make them feel physically and emotionally?

- *Theme:* What is the game about? How does it present this to players? What concepts, perspectives, or experiences might the player encounter during play? How are these delivered? Through story? Systems modeling? Metaphor?

- *Point of view:* What does the player see, hear, or feel? From what cultural reference point? How is the game and the information within it represented? Simple graphics? Stylized geometric shapes? Highly detailed models?

- *Challenge:* What kind of challenges does the game present? Mental challenge? Physical challenge? Challenges of perspective, subject, or theme?

- *Decision-making:* How and where do players make decisions? How are decisions presented? Is the information space perfect or imperfect?

- *Skill, strategy, chance, and uncertainty:* What skills does the game ask of the player? Is the development of strategy important to a fulfilling play experience? Does chance factor into the game? From what sources does uncertainty develop?

- *Context:* Who is the player? Where are they encountering the game? How did they find out about it? When are they playing it? Why are they playing it?

- *Emotions:* What emotions might the game create in players?

Exercises

1. Take a game and "reverse engineer" its design values. Pay close attention to how the game makes you feel and how you imagine the designer might have captured those feelings in design values. Follow the list of design values from this chapter as a guide.

2. Take that same game and change three of the design values. Then modify it (on paper, or by changing the game's rules) based on the new design values. How do these changes affect the whole? How different is the play experience?

Index