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INTRODUCTION

In the title, *Half-Real* refers to the fact that video games are two different things at the same time: video games are *real* in that they consist of real rules with which players actually interact, and in that winning or losing a game is a real event. However, when winning a game by slaying a dragon, the dragon is not a real dragon but a fictional one. To play a video game is therefore to interact with real rules while imagining a fictional world, and a video game is a set of rules as well as a fictional world.

Legend of Zelda: The Wind Waker (Nintendo 2003a) in figure 1.1 has been praised for its expressive graphics, lavish world, and detailed storyline. In the picture, the player's character has traveled far from his home island in search of his recently abducted little sister. In addition to the fictional world of the game, not only does a variety of on-screen displays provide the player with much information, there is also a curious arrow bouncing over the small girl in the flower field. The arrow indicates that we are playing a game with rules and a goal to work toward. It tells us that we can interact with the girl, and that she may help us progress in the game. It also illustrates that although the graphics depict an elaborate fictional world, only a small part of this world is actually implemented in the rules of the game; and the arrow indicates which part of the game fiction can also be found in these rules. Thereby *Legend of Zelda: The Wind Waker* points to a fictional world, and it points to the rules of the game. These are the two things that video games are made of: real rules and fictional worlds.

In having fictional worlds, video games deviate from traditional nonelectronic games that are mostly abstract,[1] and this is part of the newness of video games. The interaction between game rules and game fiction is one of the most important features of video games, and it is a central

| **Figure 1.1** |
Legend of Zelda: The Wind Waker (Nintendo 2003a): The arrow points to what is important according to the rules of the game.

theme of this book. Their interaction is present in many aspects of games: in the design of the games themselves; in the way we perceive and use games; and in the way we discuss games. This interaction gives the player a choice between imagining the world of the game and seeing the representation as a mere placeholder for information about the rules of the game.

In addition, we face a choice between a focus on the game itself or on the player of the game: We can examine the rules as they are found mechanically in the game program or in the manual of a board game, or we can examine the rules as something that players negotiate and learn, and at which they gradually improve their skill. We can also treat the fictional world as a fixed set of signs that the game presents, and we can treat the fictional world as something that the game cues the player into imagining

| **Figure 1.2** |
Alan Kotok, Steve Russel, and J. M. Graetz playing *Spacewar!* Courtesy of the Computer History Museum.

and that players then imagine in their own ways. This book's intent is to integrate these disparate perspectives into a coherent theory of video games.

The Old and the New

The history of video games is both very brief and very long. The first video game was probably the 1961 *Spacewar!* (figure 1.2) (Russell 1961). The video game is thus a little more than forty years old, and it has been part of popular culture for around thirty years. Compare this to the roughly seventy-five years of television, a hundred years of film, and five hundred years of the printing press. Therefore, video games are a comparatively *new* cultural form, intimately linked to the appearance of computers, postdating literature, cinema, and television. However, if we think of video games as *games*, they are not successors of cinema, print

| **Figure 1.3** |
Queen Nefretiry playing senet. Ca. 1250 BC. *Egyptian Expedition of The Metropolitan Museum of Art, Rogers Fund, 1930. (30.4.145)* Photograph ©1978 The Metropolitan Museum of Art.

literature, or new media, but continuations of a history of games that predate these by millennia. The Egyptian board game, senet (figure 1.3), found in the 2686 BC tomb of Hesy-re is a precursor of contemporary backgammon and Parcheesi, games that are commonly played *using computers* today. Therefore, the question is not whether video games are old or new, but how video games are games, how they borrow from non-electronic games, and how they depart from traditional game forms.

But why do we even play games using computer power rather than using other recent inventions such as the telephone, microwave ovens, cars, or airplanes? There appears to be a basic affinity between games and computers: Like the printing press and cinema have historically promoted and enabled new kinds of storytelling, computers work as enablers of games, letting us play old games in new ways, and allowing for new types of games that would previously not have been possible.

Games as Rules

The rules of a game provide the player with challenges that the player cannot trivially overcome. It is a basic paradox of games that while the rules themselves are generally definite, unambiguous, and easy to use, the enjoyment of a game depends on these easy-to-use rules presenting challenges that *cannot* be easily overcome. Playing a game is an activity of improving skills in order to overcome these challenges, and playing a game is therefore fundamentally a learning experience. This takes different forms in different games, but we can outline two basic ways in which games are structured and provide challenges for players: that of *emergence* (a number of simple rules combining to form interesting variations) and that of *progression* (separate challenges presented serially).

Emergence is the primordial game structure, where a game is specified as a small number of rules that combine and yield large numbers of game variations for which the players must design strategies to handle. This is found in card and board games, in sports, and in most action and all strategy games.

Progression is the historically newer structure that became part of the video game through the adventure genre. In progression games, the player has to perform a predefined set of actions in order to complete the game. One feature of the progression game is that it yields strong control to the game designer: since the designer controls the sequence of events, progression games are also where we find most games with storytelling ambitions.

Though games may be different in structure, a player approaches every game with whatever repertoire of skills he or she has, and then improves these skills in the course of playing the game. To play a game is to improve your repertoire of skills, and the challenge of game design is to work with the skill set of the player through the game.

Games as Fiction

Most video games create fictional worlds, but games do this in their own special tentative and flickering way: the hero dies and is respawned moments later; the strategy game lets players "build" new people in a few seconds; the player dies and loads a *save game* in order to continue just before he or she died; in-game characters talk about the game controllers that the player is using. These things mean that the fictional worlds of many games are contradictory and incoherent, but the player may not experience this as such since the rules of the game can provide a sense of direction even when the fictional world has little credibility. In fact, the player's experience of the game fiction appears not to require much consistency—the world of a game is something that the player can often *choose* to imagine at will.

Fiction plays a different role in different games and game genres, and while some players may be thrilled by the fiction of a game, others may dismiss it as unimportant decoration of the game rules. Nevertheless, there is a general scale from the highly replayable multiplayer game (the emergence game) where the player can gradually begin to ignore the fiction to, at the other extreme, the "complete-once" adventure game (the progression game), where the player only faces each setting once and is therefore more likely to take the fictional world at face value.

What a Game Is

In this book, I have tried to examine what (if any) similarities can be found between the majority of the things we call "games," while at the same time being open to considerations of historical change and potential discussion about borderline cases. The *classic game model* presented in chapter 2 is a snapshot of a specific way of creating "games," a model that can be traced historically for thousands of years. The classic game model consists of six features that work on three different levels: the level of the game itself, as a set of rules; the level of the player's relation to the game; and the level of the relation between the activity of playing the game and the rest of the world. According to this model, a game is

1. a rule-based formal system;
2. with variable and quantifiable outcomes;
3. where different outcomes are assigned different values;

4. where the player exerts effort in order to influence the outcome;
5. the player feels emotionally attached to the outcome;
6. and the consequences of the activity are optional and negotiable.

The six features of the model are necessary and sufficient for something to be a game, meaning that all games have these six features, and that having these features is enough to constitute a game. While we can imagine any number of other phenomena that have only some of these features, this specific intersection is uniquely productive, allowing for the huge variation and creativity that we are witnessing in games.

This game model is the basis upon which games are constructed. It corresponds to the celluloid of movies; it is like the canvas of painting or the words of the novel. The game model does not mean that all games are the same, but that with these six features we can talk about how games are different from each other. Additionally, the model does not tie games to any specific medium, and games are therefore *transmedial* in the same way that storytelling is transmedial. Storytelling is a transmedial phenomenon since many different media can tell stories; games are a transmedial phenomenon since many different media (or tools) can be used for playing games.

While video games mostly conform to the classic game model, they also modify the conventions of the classic model. Games *have* changed. So while it makes sense to see games as a fairly well defined form, this book is also about how video games modify and supplement the classic game model; the history of video games is partly about breaking with the classic game model.

The Study of Video Games

This book was born from a brief and turbulent history of video game studies. It is a response to a number of questions that have been raised in numerous conferences, seminars, articles, and discussions over the past few years. It is also a book that does not rest easily with any one tradition, but neither did it appear out of thin air. Rather my work has consisted of collecting pieces from as many different fields and people as possible, while testing my ideas on as many different audiences as I could. As the history of the video game invokes a history of non-electronic games, video game studies must admit a debt to the study of non-electronic games.

Games for Other Purposes

For reasons that escape us, games have lingered under the cultural radar for thousands of years, and most of the commentaries that touch on games have been using *the idea* of games for other purposes.

Famously, the German philosopher Ludwig Wittgenstein used the concept of games[2] for building his philosophy of language, and games were singled out as an exemplary case of something that could not be defined or narrowed down. Games also inspired a theory that discusses a relation between rules and representation: Structuralists such as Vladímir Propp and Claude Lévi-Strauss claimed that meaning or narratives were based on formal structures (Pavel 1986; Propp 1968). Ferdinand de Saussure found chess to be inspirational for linguistics; as he wrote, "a state of the board in chess corresponds exactly to a state of the language. The value of the chess pieces depends on their position upon the chess board, just as in the language each term has its value through its contrast with all other terms" ([1916] 2000, 88). Therefore, the meaning of a chess piece stems from its relation to other pieces in the game, and is independent of its shape or makeup.

Games are usually well structured problems, and this has led to their being used in several other fields. John von Neumann and Oskar Morgenstern's 1944 book on game theory, *Theory of Games and Economic Behavior* (1953), deals primarily with economics, but in a way that has some relevance for the general study of games. Their economic *game theory* uses *games* as a general term for a specific type of problem. Game theory provides a generalized description of different types of *strategies*, and even though its focus is not on "games" that are meant to be enjoyed, it turns out that the formal game theoretical properties can yield important insights into games *and* game playing. For example, a game with a dominant strategy (a strategy that is better than all other strategies) is often *boring* because the player is not challenged in any way.

It is also the well structured character of games that have made them into a stable of artificial intelligence research. In 1950, Claude Shannon proposed using chess as a starting point for developing the modern "general purpose computer":

The chess machine is an ideal one to start with, since: (1) the problem is sharply defined both in allowed operations (the moves) and in the ultimate

goal (checkmate); (2) it is neither so simple as to be trivial nor too difficult for satisfactory solution; (3) chess is generally considered to require "thinking" for skilful play; a solution of this problem will force us either to admit the possibility of a mechanized thinking or to further restrict our concept of "thinking"; (4) the discrete structure of chess fits well into the digital nature of modern computers. (Shannon 1950)

What the development of chess playing programs actually demonstrated was that humans play chess (and solve problems) in many different ways, and usually not as the early chess programs did, which was by considering as many chess positions as possible. In this way, the development of chess programs has been connected to cognitive science, where many studies have been conducted of how humans actually play games. Specifically, Adriaan D. De Groot's (1965) study of chess players looks into the psychology of play rather than the purely strategic aspect of play. Games and game-like problems have been commonly used for studying human problem solving—for example, in the work of Allen Newell and Herbert A. Simon (1972).

Finally, as Marcel Danesi has explored, games and puzzle solving have yielded many mathematical insights and methods. For example, the field of graph theory originates from the mathematician Leonhard Euler's study of the *Königsberg Bridge Problem:* whether seven bridges in the city of Königsberg could be traversed without crossing any bridge more than once (Danesi 2002, 19–22; Weisstein 2004). All of this demonstrates that game-related research has historically mostly been concerned with using games for studying other matters, and the insights reached concerning games have mostly been incidental to this research.

Games for Their Own Sake

In the study of games for their own sake, the field has been widely scattered historically. It probably flourished first in the late nineteenth century around folklore studies, for example in the work of Stewart Culin's 1907 *Games of the North American Indians* (1992), an 800-page collection and categorization of the games of Native Americans. Game studies also flourished around 1970. For example, E. M. Avedon and Brian Sutton-Smith's anthology *The Study of Games*[3] (1971) is an excellent overview of theory on non-electronic games, collecting articles into sections on the history of

games, the usage of games, and the structure and function of games. *The Study of Games* demonstrates that the narrow history of game research has mostly been sociological, anthropological, or philosophical, but not very well developed as an aesthetic field. That is, while much space has been devoted to the study of people (other than the researcher) playing games, very little has been said about the first-person experience of playing a game.

The two classic texts of game studies are Johan Huizinga's *Homo Ludens* (1950) and Roger Caillois's *Man, Play, and Games* (1961). For my purposes here, they suffer from the same problem of covering a broader area than *games* in that both discuss rule-based games as well as free-form play. Johan Huizinga focuses on *play* as a central component of all culture, but provides only sketchy discussions about games as such. Caillois is best known for his categorization of games (and play) into *agôn* (competition), *alea* (chance), *mimicry* (simulation or make-believe), and *ilinx* (vertigo). If anything, Caillois demonstrates that categorizations need to clearly reflect their goals and presuppositions, since in actuality games are not choices *between* chance and competition, or even placed on a scale between them, but rather almost all games are competitive *and* contain varying amounts of chance. It seems more reasonable to describe chance as one single example of a multitude of game design principles (as discussed in chapter 3) on the same level as showing or hiding information, mutual or contradictory goals, etc. Likewise, while *ilinx* (vertigo) is certainly a part of many physical game activities and of many video games, it is but a single example of the infinite number of different types of experiences that a game can give.

A complementary examination of games is provided by Bernard Suits's philosophically oriented dialogue *The Grasshopper* (1978), where a series of game definitions are proposed and discussed. Suits is best known for his description of games as letting the player reach the goal using only the *less efficient means* available. Suits belongs to a tradition of sports philosophy that has grown largely around the *Journal of the Philosophy of Sport*. This book is intended to be less purely philosophical than sports philosophy, but on the other hand more aesthetically oriented than play studies, a field that is often oriented toward the play of children. R. E. Herron and Brian Sutton-Smith's *Child's Play* (1971) provides a good overview of the field, as does Sutton-Smith's *The Ambiguity of Play* (1997).

Video Game Studies

The relatively short history of video games is complemented by an even shorter history of research. It is only around the turn of the millennium that video game studies began to come together as a field with its own conferences, journals, and organizations. This brief history has been something of a gold rush and a race toward being the first to point out special aspects of games, to format the field, to define words, and to point to similarities and dissimilarities between games and other cultural forms. This is not the place for an exhaustive review of the field so far; I will simply relate the discussions to which this book responds.

Video game studies have so far been a jumble of disagreements and discussions with no clear outcomes, but this need not be a problem. The discussions have often taken the form of simple dichotomies, and though they are unresolved, they remain focal points in the study of games. The most important conflicts here are games versus players, rules versus fiction, games versus stories, games versus the broader culture, and game ontology versus game aesthetics.

Games or Players

A basic dichotomy concerns whether we study the games themselves or the players who play them. Economic game theory is arguably originally the study of games as objects unrelated to players, but game theory does not rule out discussion of player experiences—it is just outside the scope of game theory. Still it would be perfectly possible to propose that we look exclusively at the games "themselves," while ignoring the fact that they are played by people. We can then at least imagine the reverse argument that declares the rules of a game unimportant compared to the way they are actually used. Linda Hughes has examined how a group of girls played Foursquare.[4] This turns out to be a combination of official and unofficial rules, conflicting success criteria, and rule negotiations. According to Hughes, "Game rules can be interpreted and reinterpreted toward preferred meanings and purposes, selectively invoked or ignored, challenged or defended, changed or enforced to suit the collective goals of different groups of players. In short, players can take the same game and collectively make of it strikingly different experiences" (1999, 94). This is a convincing argument, and part of a larger point that children's games cannot be meaningfully described only as the rules that make them up. If we took

this argument to a logical extreme, we could claim that the game rules do not matter at all. This argument would unfortunately imply that the children might as well be fencing, playing poker, or playing rugby! A more detailed analysis of Foursquare reveals that the protracted structure of the game, with no clear termination, no final winner, and no clear score count *allows* the players to play while having many other considerations than simply perfecting their own performance. Moreover, the unclearness of some rules such as the rule against slamming[5] makes room for all kinds of social power play. At the same time, the players have *chosen* to play this game rather than other games, and players change the rules because they want to play *this game*, with specific rules. We cannot ignore the role of the rules without ignoring a basic aspect of the player experience: that different games yield different kinds of experiences.

Rules or *Fiction*

The main argument of this book, that video games are rules *and* fiction, is a response to a long history of discussions of whether games were one *or* the other. As in Saussure's observations about chess, it has often been noted that in a board game the actual shape of a piece appears unimportant in relation to the rules. Erving Goffman has proposed a principle called *rules of irrelevance*, meaning that the specific shape of a piece in a game is not important:

> [Games] illustrate how participants are willing to forswear for the duration of the play any apparent interest in the aesthetic, sentimental, or monetary value of the equipment employed, adhering to what might be called *rules of irrelevance*. For example, it appears that whether checkers are played with bottle tops on a piece of squared linoleum, with gold figurines on inlaid marble, or with uniformed men standing on colored flagstones in a specially arranged court square, the pairs of players can start with the 'same' positions, employ the same sequence of strategic moves and countermoves, and generate the same contour of excitement. (Goffman 1972, 19)

Roger Caillois does not deny that games can have fiction, but surprisingly states that games are rules *or* fiction, that rule-based games *do not* have a make-believe element:

Despite the assertion's paradoxical character, I will state that in this instance the fiction, the sentiment of *as if* replaces and performs the same function as do rules. Rules themselves create fictions. The one who plays chess, prisoner's base, polo, or baccara, by the very fact of complying with their respective rules, is separated from real life where there is no activity that literally corresponds to any of these games. That is why chess, prisoner's base, polo, and baccara are played *for real*. *As if* is not necessary.... Thus games are not ruled and make-believe. Rather, they are ruled *or* make-believe. (Caillois 1961, 8–9)

The division is, however, contradicted by most modern board games and video games. Most video games are ruled *and* make-believe.

In video game studies, the denial of fiction is an alluring position that I have also previously taken (Juul 1998). It is based on a simple recurring argument that tends to follow this pattern:

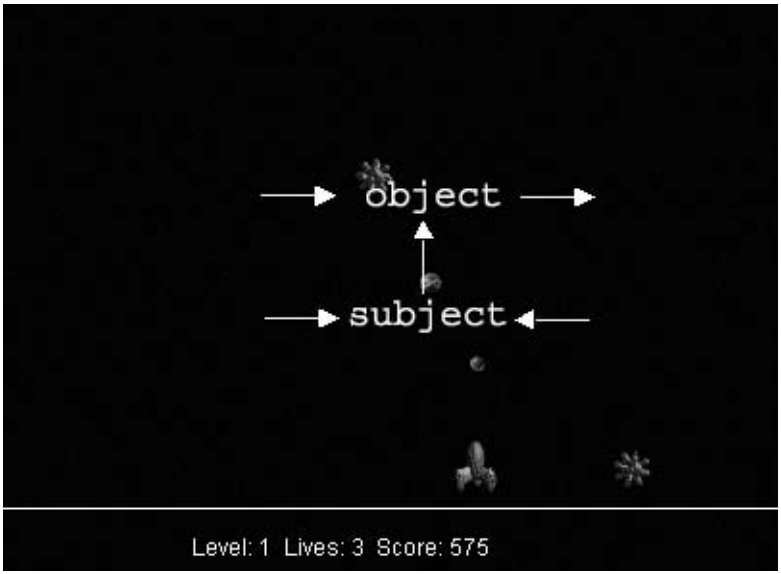
1. Rules are what makes a game a game.
2. Fiction is incidental to whether something is a game.
3. A game can be interesting without fiction.
4. A game with an interesting fictional world can be a terrible game.
5. Therefore, fiction in games is unimportant.

Though the conclusion is tempting, it is also false. Compare these two games based on identical rules (and programming), but with different graphics. In the first game (figure 1.4), the player controls a spaceship in a battle against the heads of the hosts of a television program. In the second game (figure 1.5), the player controls a spaceship in a battle against various theories, in this case a narratological model.

In a 1998 paper, I compared two games based on this program, and my conclusion was as follows: "As you can see, the symbolical or metaphorical meaning of the game is not connected to the program or the gameplay. The relationship is, in a word, *arbitrary*" (Juul 1998).

This idea that the representation of a game is irrelevant appears to have a constant allure, but it also break down upon further scrutiny. The game designer Frank Lantz has provided a similar argument based on design experiences:

| **Figure 1.4** |
Puls in Space (Juul 1998a).



| **Figure 1.5** |
Game Liberation (Juul 2000).

I began to think about how structure and representation work in games. There was a notion buried in my original idea, the idea of a fundamental separation between a game's structure and whatever subject matter or activity or setting the game represents. The implication was that you could take any number of different structures and match them up with various themes for different effects, but there wasn't any *deep*, *essential* relationship between any particular theme and any particular game mechanic. . . .

After a couple of months of banging my head against it, this notion seemed less certain, or at least less interesting. . . .

There are, of course, many relationships between theme and structure in a game. Whether or not any of those relationships are *essential*, they are complex and vital enough to resist my attempt to lightly shuffle them around. (Lantz 2004, 310)

This strongly suggests that the relation between rules and fiction in the games in figure 1.4 and 1.5 is *not* arbitrary. Rather, these two games are *satirical*. In the first case they stage the love/hate relationship that viewers may have with television personalities as a deep-space battle. In the second case they stage an academic discussion—defending games against theoretical imperialism—as a deep space battle. Both are based on a background of some existing antagonism—and that is why they work, because the rules fit the representation—in an allegorical way.

Games Telling Stories

The early years of video game studies were often conceived as a discussion between *narratology* (games as stories) versus *ludology* (games as something unique). This discussion tended to alternate between being a superficial battle of words and an earnest exploration of meaningful issues (Murray 1997; Frasca 1999; Juul 1999; Eskelinen 2001b; King and Krzywinska 2002b; Atkins 2003; Aarseth 2004a; Jenkins 2004). Video game studies did not appear in a vacuum, so we need to remember the history that led up to this discussion. While *narratology* originated from Aristotle's *Poetics* and the study of storytelling media such as drama, novels, and films, the concept of *narrative* is today commonly used in a much broader sense. We can speak of a *narrative turn* after which it has become common to see narrative as the primary way in which we make sense of and structure the world. From this perspective, such different things as scientific

discourse, the ideology of a nation, and our understanding of our personal lives are structured in the same way, using narratives. Espen Aarseth (2004a) has criticized this for being an unproductive ideology of *narrativism*. Outside game studies, Thomas Pavel (1986) has called this *mythocentrism*. The description of games as storytelling systems often overlaps with the prescriptive idea that video games (or "interactive narratives") would be *better* if they were more like stories. Building on Aristotle, Brenda Laurel (1986) has proposed a system for generating well formed plots. In this system, the computer program must take on the role of an author while the game progresses and make sure that regardless of the player's actions, every game session becomes well formed. Janet Murray's book *Hamlet on the Holodeck* (1997) describes the similar utopia of a *holodeck*—a completely immersive and transparent environment in which a user/player can engage in a well formed story. While this is in itself an overwhelming technical challenge, the logical problem is that there is no compelling argument demonstrating that a well formed "narrative" would be a more interesting *player* experience.[6]

Ludology is broadly taken to mean "the study of games." The history of the word itself is something of a mystery—its earliest known usage is from 1982 (Csikszentmihalyi 1982). *Ludology* was probably popularized by Gonzalo Frasca's 1999 article "Ludology Meets Narratology." I first used it in my paper "What Computer Games Can and Can't Do" (Juul 2000). From the outset, ludology has often been perceived as focused on distancing itself from narratology, and as trying to carve out video game studies as a separate academic field.

Some more recent theory has tried to stake something of a middle ground where the unique qualities of games are not denied, but the function of fiction or story in a game can still be discussed. In Rune Klevjer's paper "In Defense of Cutscenes" (2002), he criticizes "radical ludology" for completely dismissing cut-scenes (cinematic intermissions in games), and argues that cut-scenes serve several positive functions: they provide a unifying logic for the game and rewards for the player's actions. Additionally, Wibroe, Nygaard, and Andersen's article "Games and Stories" (2001) offers a nuanced discussion of game-story relations.

From the other end of the spectrum, Geoff King and Tanya Krzywinska (2002a) have discussed the relationship between games and cinema as a complex relationship with synergy and mutual inspiration as well as some

notable differences. As an attempt at bridge-building between the open structure of games and the closed structure of stories, the concept of *quests* has been proposed by Ragnhild Tronstad (2001), Espen Aarseth (2004b), and Susana Tosca (2003). Quests in games can actually provide an interesting type of bridge between game rules and game fiction in that the game can contain a predefined sequence of events that the player then has to actualize or enact. This is discussed as a *progression* structure in chapter 3, and the relation between games and stories is discussed at the end of chapter 4.

Games or the Broader Culture

In a broader perspective, Henry Jenkins (2003) sees video games as part of a bigger complex of *transmedia storytelling*, where content can move between different media. In this broad sense of storytelling, video games *are* part of a general ecology of transmedia storytelling, but on a level that is often closer to the level of toys and merchandising than to the level of movies or novels. Realistically, video games are to some degree part of a general *storytelling ecology*, incorporating at least some elements of popular stories.

Just as we can choose to discuss games or players, we can also choose between studying a specific game for its role in the general media ecology or focusing on the game itself and the playing of the game. There is no reason to commit ourselves to one side of the discussion.

The added perspective in this book is that video games are also part of a general *game ecology*, where the video game incorporates other kinds of games and inspires other types of games.

Game Ontology or Game Aesthetics

We can also choose to discuss what video games *are* (ontology) or what they *should be* and what makes them enjoyable (aesthetics). In practice, this can be quite muddled: The video game researcher is usually (and arguably should be) a big fan of video games, and hence the game researcher enters the field with preferences for specific types of games, and the selection of games influences the researcher's arguments.

The extreme version of this is the game review, written with the explicit purpose of evaluating the quality of a game. I will be quoting reviews from several sources in order to discuss the relative merits of different

games and different ways of structuring games. Game reviews provide documentation about the informal vocabulary that is used in the video game community. It is worth remembering that terminology is continually developed and discussed outside academia, and that this, too, is worthy of attention.

One issue is to what extent game research should deal with game design. The game development community has in recent years produced a large body of interesting books and articles. Chris Crawford's seminal *The Art of Computer Game Design* (1982) is an early discussion of video game design, but for the purpose of this book, more relevant discussions can be found in Richard Rouse's *Game Design—Theory and Practice* (2001) and Andrew Rollings and Dave Morris's *Game Architecture and Design* (2000). Game development writings cover a variety of different subjects including programming, artificial intelligence, 3-D graphics modeling, 3-D texturing, sound, music, team building, team management, as well as what is closest to my focus, game design. I will refer to a number of articles and presentations from *Game Developer Magazine*, *Gamasutra*, and the annual Game Developers' Conference.

If game design and game research often fall into separate camps, Katie Salen and Eric Zimmerman's book *Rules of Play* (2004) is a good example of how they can overlap. Working on the three levels of rules, play, and culture, Salen and Zimmerman describe games from a multitude of perspectives using examples of many games commissioned for the book. For various historical reasons, it is tempting to choose between being theoretical or practical, and while the present book is primarily theoretical, it is meant to be at least compatible with practical work on games.

Fun in Theory

When we are theorizing about games, it can seem that games contain a built-in contradiction: Since play is normally assumed to be a free-form activity devoid of constraints, it appears illogical that we would choose to limit our options by playing games with fixed rules. Why be limited when we can be free? The answer to this is basically that games provide context for actions: moving an avatar is much more meaningful in a game environment than in an empty space; throwing a ball has more interesting implications on the playing field than off the playing field; a rush attack is only possible if there are rules specifying how attacks work; winning the game

requires that the winning condition has been specified; without rules in chess, there are no checkmates, end games, or Sicilian openings. The rules of a game add *meaning* and *enable actions* by setting up *differences* between potential moves and events.

Likewise, a game for multiple players is nominally a *limitation* of what the players are allowed to do, but it is a limitation that provides an occasion for interesting social interaction. When it is sometimes suggested to be a problem that games are competitive, it is a basic misunderstanding of how a game works: The conflict of a game is not antisocial; rather it provides a context for human interaction. Controlling a character that hits a character controlled by another player does not mean that one wants to attack that other person in real life: It means that one enters a complex world of symbolic interactions where attacking someone in a game can be an invitation to friendship, and helping someone in the same game can be a condescending rejection. In a game, things are not what they seem. Humans are not always literal in their interactions, and we cannot take human games at face value. Competitive games are social affairs, and much more so than the rarely played non-competitive games that have been proposed.[7]

Why are video games fun? One idea states that the all-important quality factor of a game is its *gameplay*, the pure interactivity of the game. In other words, that the quality of a game hinges on its rules, on the game-as-rules rather than on the game-as-fiction. In the words of Sid Meier, designer of *Civilization* and other classics, a *game is a series of interesting choices* (Rollings and Morris 2000, 38), by which Meier means that high-quality games are the ones whose choices provide high-quality mental challenges for players. While this is a compelling idea, a closer examination reveals many games that are considered enjoyable even though they do not provide any mental challenges. I believe that there is ultimately no one-sentence description of what makes all games fun; different games emphasize different types of enjoyment and different players may even enjoy the same game for entirely different reasons.

By analogy, James Cameron's movie *Titanic* (1997) contains a historical element, the spectacle of a big ship crashing into an iceberg, political commentary on class societies and gender roles, dramatic action where we follow an escape from the ship as it sinks, a hit title song, and, of course, a love story. Different viewers may enjoy the film for different

reasons, and one viewer may enjoy the action sequence while disliking the hit song, while another viewer may like the love story and the hit song, but dislike the action sequence. Part of the audience may simply be in the theater because the people they were with wanted to go. Any popular cultural object or pastime can be popular for several different reasons at the same time.

Fortunately, this does not prevent us from discussing game enjoyment in more detail. The idea of what makes a game enjoyable may change over time and things that were once considered dull obstacles to the player's enjoyment can be foregrounded and become the central focus of a new game. Arguing about the rules of a game is often considered a problem, but it can also be enjoyable in its own right. Though a game generally maintains some consistency in the kinds of challenges it presents to a player, it is also possible to enjoy a game because the challenges it presents are inconsistent. And even though games usually let players perform actions that they can not perform in real life, it is, for example, possible to make a popular game like *The Sims* (Maxis 2000) that involves mundane tasks such as cleaning a house.

The Cultural Status of Games

Video games are notoriously considered lowbrow catalogues of geek and adolescent male culture. While this is not the whole picture, there is some extent to which the settings of many games can be somewhat unimaginative and where the actions that the players can perform tend to be simple. Video games generally focus on manipulating and moving objects, and less commonly address the more complex interactions between humans such as friendships, love, and deceit. We can suggest many reasons why this is so—we can blame unimaginative game designers; we can blame a conservative game audience; we can blame a risk-averse game industry; and finally we can look at game design and see that the game form lends itself more easily to some things than to others—it is *hard* to create a game about emotions because emotions are hard to implement in rules.

While games are regularly considered lowbrow, this is often due to some very naïve notions of what is highbrow or what is *art*. In a very simple view of art, art is what is ambiguous, whereas most games tend to have clear rules and goals. As Immanuel Kant would have it, art is *without inter-*

est, whereas game players clearly play with *much* interest and probably send the wrong signals simply because they *look* completely unlike visitors to an art gallery. We cannot reasonably use such claims as checklists, and we should avoid thinking about art, and games, in a limited and unimaginative way.

It should also be clear that playing a game does not imply literally endorsing the actions in the game or wanting to perform them in real life. This book is not about violence in games, but followers of the discussion may find it interesting to consider what a game is or what role the fictional world of a game plays. There are certainly strong arguments in favor of seeing the fictional worlds of games as just that, *fiction*. In a historical perspective, the current preoccupation with the assumed dangers of video games is a clear continuation of a long history of regulation of *games* as such: For example, in 1457 golf was banned in Scotland because it was felt that it kept young men from practicing archery (Avedon and Sutton-Smith 1971, 24). Pinball machines were banned in New York City from the late 1930s to 1976 (Kent 2000, 72). The Australian Office of Film and Literature Classification refused to classify *Grand Theft Auto III* (Rockstar Games 2001), making it illegal to sell it in Australia (IGN.com 2001). Video games were accused of being the reason for the Columbine high school shootings in the United States (Jenkins 1999). Perhaps games have always had the appearance of an uncontrollable activity with unclear and double meanings, and this is why they continue to be targets of regulation.

I do not see any particular contradiction between enjoying an action game and enjoying the poetry of Rainer Maria Rilke. There are a number of historical reasons why we might be tempted to see these things as incompatible, but they are basically misunderstandings. There is nothing inherent in video games that prevents them from ultimately becoming and being accepted as high art, even if this may take some time.

About This Book

The methods chosen in this book are intended to be non-exclusive. A method can easily preclude other methods of investigations, but the present investigation is meant to be at least *compatible* with empirical studies, game design, sociology, film theory, and more. I have attempted to be open about the status of different discussions and definitions, and I have tried to avoid preference for any specific type of conclusion.

In addition to this introduction, the book has five parts.

Chapter 2 presents a *classic game model;* this model was inspired by a number of previous writers on games. The model describes how games have been constructed in a specific historical period, while allowing for the possibility that video games have developed beyond this older model.

Chapter 3, on rules, attempts to combine a former understanding of game rules with a focus on the experience of playing games. In order to describe games as rule-based systems, I draw on computer science and the sciences of complexity. To describe the player's use and experience of the rules of a game, I draw on Marcel Danesi's writings on puzzles (2002), some game design theory, and some cognitive science.

The goal of chapter 4, on fiction, is to provide an account of the fictional aspect of games, an account that covers the spectrum from abstract games to games with incoherent fictional worlds to games with detailed fictional worlds. To be able to discuss this spectrum, the theory of *fictional worlds* is employed.

Chapter 5, on rules and fiction, is the synthesis of the two perspectives of rules and fiction and discusses their interactions using multiple examples.

Chapter 6 sums up the points of the book and provides some further perspectives.