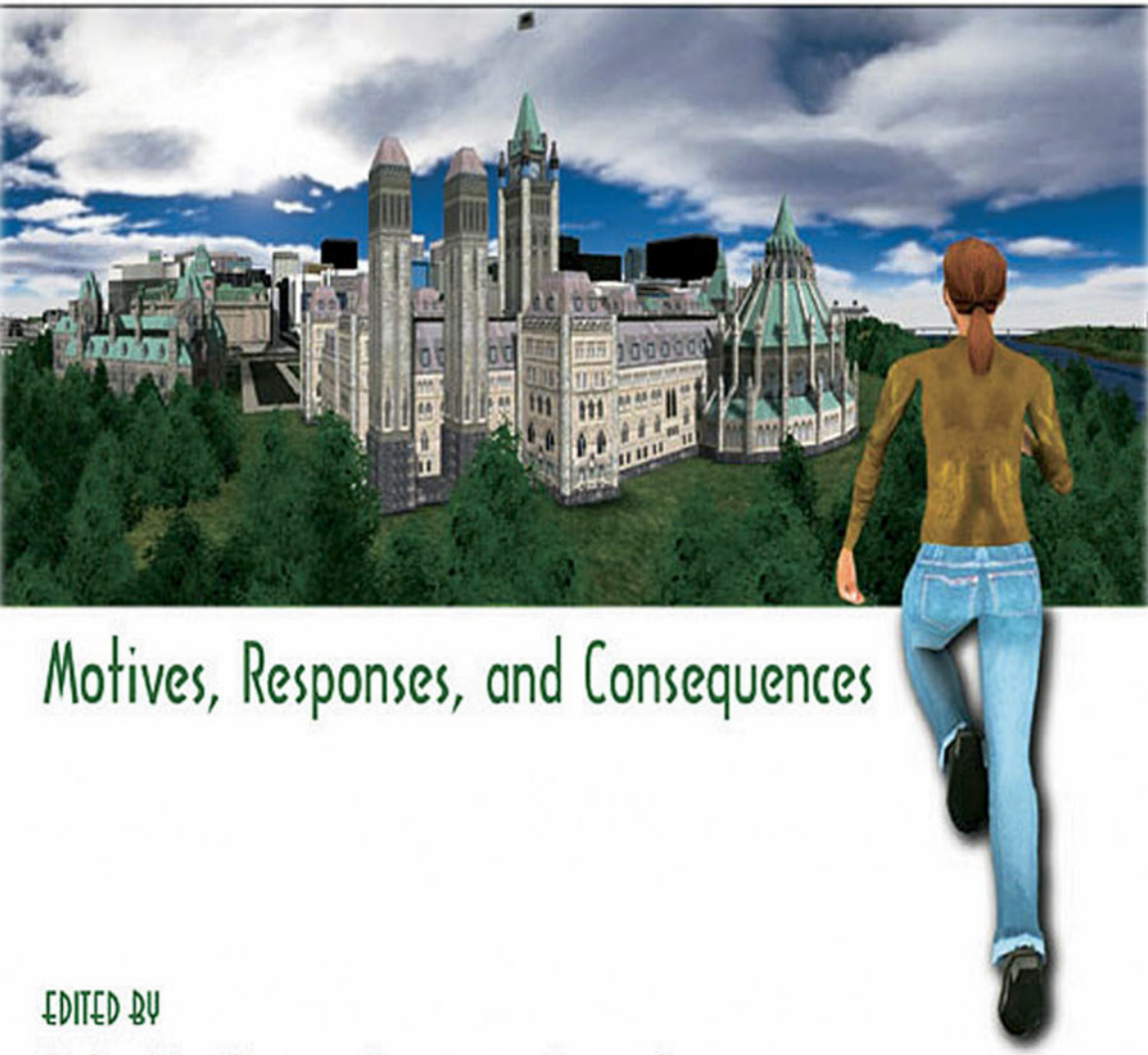
PLAYING VIDEO GAMES



Motives, Responses, and Consequences

EDITED BY

Peter Vorderer · Jennings Bryant

PLAYING VIDEO GAMES

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Foreword

When Palladas, the Greek poet who flourished in the 4th century A.C.E., said that life is but a game, he hardly could have imagined how pervasive games would become in every aspect of our modern lives. From security training simulations to war games and role-playing games, from sports games to gambling, playing video games has become a social phenomena and the increasing number of players that cross gender, culture, and age is on a dramatic trajectory.

Game play—and by that I mean simply computer-based game play—has become a driving economic force that is now giving shape to the technology landscape that supports it. With game play producing revenues in excess of $30 billion worldwide, it is not hard to imagine that a cutting-edge 3-D game can push the lagging revenues of a graphic chip manufacturer into soaring profitability. And so it goes that the fantastic developments in low-cost graphics capability feed the demand for more realism, simulation, and complex game play, which in turn require an even more sophisticated graphics capability in order to play the more demanding game.

This market thrust of pushing development by interweaving content and technology is the dominant feature of today's game play. The latest releases of popular games such as *DOOM 3, HALO 2,* and *World of Warcraft* outperform the commercial success of Hollywood movies and have an extraordinary level of realism that often can not be fully experienced without players upgrading their graphics hardware to the latest specifications. Game experience drives development even in the dedicated high-end game platforms that are another competitive solution for gamer players. Each of the majors—Sony, Microsoft, and Nintendo—regularly releases proprietary hardware that support new levels of graphic capability, but each release is short-lived only to be replaced by yet another, newer technology innovation.

Four years ago E3, the world's largest trade show for game players, distributors, and developers, featured a panel on massively multiplayer online games (MMOGs). The panel was made up of badly bruised and battered developers of these games, each of whom had lost money in the realization of their product and now faced another tough sentence: The audience was unrepentant and vocal in their belief that there would never be a market for people playing together in networked game environments.

In only a few short years, the world for online gamers has shifted completely. Online game play is now considered one of the highest growth opportunities for the commercial future of games. In North America we recently saw the U.S. military host a game developers' conference called "Serious Games" that focused on game-based team training, while the entertainment industry released the hugely popular MMOG called World of Warcraft. These uniquely distinct events share a common thread: They firmly establish the growth of social computing.

With all this frenzied development, what has not been rapidly upgraded or easily replaced is the thinking and academic research about game play itself. This anthology, providing an in-depth review and analysis of playing video games based on study of motives, responses and consequences, is long overdue. By deconstructing the topic into products, motivation and selection, reception and reaction processes, and effects and consequences, the editors have established a foundation in the understanding of what playing video games is all about.

Editors Vorderer and Bryant establish the playing field, focusing their extensive knowledge in entertainment theory to tackle challenging question and putting them into a context of academic research on entertainment. Unlike movies, however, games by their very nature set up the player as the director, with the action taking place in real time. Games, therefore, seem to be the real entertainment of our times, but playing them at the same time is so much different from traditional entertainment.

A total of 27 chapters, written by authors from all around the world, deal with every issue that is most pressing and urgent for our understanding of the more specific nature of playing these games. Overall, this seminal text arrives at a pivotal time in the history of video game development. The relevance of these writings will be equally meaningful to teachers, academics, and parents as to the established commercial game industry and experimental new indie producers.

—Stacey Spiegel, President and CEO
Immersion Studios, Inc., Toronto

Preface

This book has two ancestors: One of them is another book; the other one is a misfit. The other book is currently in press with Lawrence Erlbaum Associates under the title *Psychology of Entertainment.* Here is the backstory: When Jennings Bryant tired of never having adequate materials to teach a doctoral seminar on entertainment theory and research, he asked Peter Vorderer to join him in editing a scholarly volume that would have the advanced content and perspectives needed for such a course. While they were contemplating potential chapters and contributors for such a book, it became obvious that video games have become one of the—if not *the*—most important means of entertainment, at least for the younger generation. Moreover, when they taught entertainment at their various schools or presented papers on entertainment at conferences in the United States and abroad, it became equally obvious that the greatest interest in entertainment theory and research often came from junior faculty and from graduate students who were particularly intrigued by the newest and latest ways of becoming entertained. Often their preferred sources of entertainment were not traditional media, such as television, movies, or music. The delivery format for such contemporary entertainment was something that has been called digital or interactive entertainment. Although such media seemed to have lots of similarities with traditional entertainment, significant and substantial differences were also abundantly present. Many of these young scholars frequently complained that, despite the emerging status of entertainment theory in psychology and communication, there have been few attempts to apply the theory to the playing of video games and to thereby systematize this new field of research. After being hit over the head with such persuasive arguments several times, your responsive editors finally realized that a book that would bring together all these young (typically, but not always) scholars from around the world could enlighten our understanding of what happens when people play video and computer games.

At about the same time, the two editors also submitted a panel to the annual conference of the International Communication Association (ICA). This panel also was supposed to bring together scholars from around the world who would demonstrate and share their findings and insights on electronic games with their peers. The panel proposal, however, was rejected by the Mass Comm division of ICA on the grounds that the reviewers did not think it would fit into this particular branch of the discipline. So here is the misfit—one that puzzled and irritated your editors to such an extent that it finally motivated them to pull together a book that would be able to reach across divisions of a discipline. But, there was a hitch. This other book on the *Psychology of Entertainment* was already in the works, and who would be crazy enough to do two books at the same time?

Sure, our spouses dissuaded us from doing it, and our students and friends suggested we do one after the other, but we could not help developing both projects at the same time. One reason for our unwillingness to defer either idea was because we thought each project was so timely that if either were deferred, the discipline would suffer from the delay. Personally, neither of us has seen another topic within our discipline that has received more attention, more concern, and a greater need for understanding and explanation in such a short period of time as this burgeoning research area of

entertainment theory. In particular, the video game industry is growing faster than any other entertainment industry, and electronic games have infiltrated and already changed our lives as much if not more than any other medium. Moreover, public opinion is highly alert to several facets of video game uses and effects, and universities around the world have started to put together programs, curricula, and research teams to better understand what playing electronic games may do to us. We simply cannot afford to postpone a more systematic and empirical study of playing video games.

We also found that most of the university programs that have been put together so far have focused on the creative side of video games, that is, on the art of storytelling and on the production of games. While this aesthetic and engineering perspective is crucial for developing and producing games, equally important are programs that take the perspective of examining their uses and effects. Such perspectives ask how people play games, why they play, and which games they play under what conditions and reasons, and what these games do to users as well as what gamers do with their games, both in the short term and in the longer term. Naturally, these are the questions scholars in media psychology and communication are interested in and are capable of answering, which is why we thought it was essential to put together this volume—if we could only obtain the commitment of these extremely busy scholars. Fortunately, our contributors were able and willing to meet the challenge.

No doubt, such a project with 51 contributors from the United States, Europe, Asia, and Australia would not have been possible without a publishing company that has supported us from the very beginning, and one that is as reliable and competent as we have always found them to be. We are extremely thankful to Linda Bathgate and to her team at Erlbaum for all their advice and for the patience they have had with us. We are also grateful to our contributors, who not only came from different places around the globe but also from different disciplines within the academic world and various gaming industries. We offer special thanks to Stacey Spiegel, who not only penned the foreword to the volume, but who also had his company's best designers create a cover for it.

The book is aimed at students, young and old, who would like to understand how, why, and with which consequences people play video games. It may be used inside and outside of classrooms for communication and media studies, in psychology, in human development, and in education both as an introductory reference resource as well as a textbook. It brings together an extremely talented group of international scholars who recognize—indeed, insist on—the relevance of video games in our lives.

—Peter Vorderer
—Jennings Bryant

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PLAYING VIDEO GAMES
Motives, Responses, and Consequences

CHAPTER 1
Playing Video Games as Entertainment

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Video games have surpassed the designation of "fad" or "new technology" to become a staple of contemporary entertainment. In 2003, computer and video game software sales totaled $7 billion in the United States—more than 239 million units—which is nearly enough for every American household to have purchased two games (Entertainment Software Association, 2004a). In the year 2000, "the demand for computer and video games created a $10.5 billion market" for the game industry, including such subsets as transporting and wholesaling (IDSA, 2001, p. 4). Clearly, entertainment needs that can be satisfied by game playing can generate quite a bit of revenue.

Increasing game sales are not the only indication that gaming has found a place in American—and international—homes. The Entertainment Software Association (ESA), which represents the computer and video game industry in the United States, tracks the demographics of game players. According to the ESA, 50% of all Americans play games, and the average age of a game player is 29 years old (ESA, 2004b). Interestingly, the ESA states that 39% of all gamers are female, dispelling the popular notion that games are a totally male-dominated pastime. Perhaps most importantly, the increases in players and revenue show no signs of stopping or even slowing; according to the ESA, more than 50% of gamers predict that in 10 years they will play as much or more than they currently play (ESA, 2004a).

A 2003 report by the Kaiser Family Foundation shows that even the youngest children have experience with video games; nearly half of all children (49%) ages 0–6 have a video game player in their home, and 10% have a video game console in their bedroom. Thirty percent of young children have played video games, including 3% of children younger than 2. Although game playing is less common among children this age than using other media, 50% of children ages 4–6 play video games, and on a typical day, 16% play for a little more than an hour (1:04). Among boys this age, 9% play games every day, but only 2% of girls ages 4–6 play games this often (Kaiser Family Foundation, 2003). Clearly, video games are popular with younger members of society.

Industry members and nonprofit organizations are not the only groups interested in the pervasiveness of video game play. Academicians who study computer and video games have formed research groups, such as the Center for Computer Games Research Copenhagen, MIT's Comparative Media Studies program, and other similar groups across the globe. One such group at the University of Southern California, the Annenberg

Studies on Computer Games Group (ASC Games), recently conducted an exploratory survey to determine the prevalence of game play and other factors associated with play. A total of 314 individuals completed the online survey; of these, 94% (n=297) responded that they play video games, and 75% of respondents said that they played video games every day.

Players' favorite genres were shooter (57.5%), role-playing (54.8%), adventure (48.6%), and strategy/puzzle (48.3%) games. Examples of these games include the popular *Max Payne* and *Lara Croft: Tomb Raider* series, and even PC-based games such as solitaire. Game players expect these genres to remain their favorite for some time as well. Ninety-four percent responded that they expect to be playing games in 10 years, with little variation expected in their favorite genres: role-playing (55.8%), shooter (53.8%), strategy/puzzle (49.8%), and adventure (45%). These findings are similar to the ESA's list of top-selling game genres. In 2003, the best selling console genres were action (27.1%), sports (17.6%), racing (15.7%), and role-playing (8.7%), and for computer games were strategy (27.1%), children's (14.5%), shooter (13.5%) and family entertainment (9.5%) games (ESA, 2004b).

Video and computer games are quite obviously *entertaining* to those people who play them. Respondents overwhelmingly indicated that when forced to choose between video games and other media, they would rather give up television (73.6%) or movies (69.3%). However, does this qualify them as *entertainment*? Is it possible to use theories that explain "traditional" entertainment products (i.e., television, films) to describe what happens when people play games?

THE BOUNDARIES OF TRADITIONAL ENTERTAINMENT THEORY

Vorderer (2000) has pointed out that interactive entertainment poses special challenges to theories of entertainment, which rely on the assumption that users are receptive to content and process what is given to them. Interactivity, however, assumes that content evolves as the user participates with the medium. Computer and video games, unlike television or films in general, contain content that is modified by the user and may change as play develops.

Interactivity poses a unique question for individuals seeking to understand what it is that drives players to use a particular game or even games in general. Respondents to the ASC Games Group survey stated that "competition" was the most important factor (31%), followed by "challenge" (21.4%), for their enjoyment of game play. Respondents also said that they are most likely to purchase a game "because the game will be challenging" (55%). Despite these results, very few tests determine what factors of "competition" or "challenge" are particularly stimulating to players. Other studies (Sherry, de Souza, Greenberg, & Lachlan, n.d.) also demonstrate that the rewarding nature of a challenge or competition drives individuals to use games. These gratifications hold among children, adolescents, and college students (Sherry et al., n.d.). The most intricate process of establishing new gratifications of video game play, however, comes in defining what it is about "challenge" that is motivating. Researchers have already contemplated the defining characteristics of such gratifications as "information," "diversion," or even "entertainment," but have yet to clearly delineate what "challenge" and "competition" mean for video game players and why they are so appealing.

Continually evolving content requires special approaches to the narrative structure of video games. Grodal (2000) discussed three dimensions of entertainment that are experienced fundamentally differently in video games than in more traditional entertainment genres. In a situation in which the viewer or player takes an active role in constructing content, our academic understanding of the role or structure of curiosity, surprise, and suspense needs adjustment. These three aspects of narrative create arousal in viewers and players that will govern their emotional experience while using a film or video game. Interactivity allows for multiple unique interactions with a given entertainment product, which changes the function of curiosity, surprise, and suspense. According to Grodal, especially in video games, "the experience of given situations will change over time, due to learning processes that will change arousal and will change the cognitive labeling of the arousal" (2000, p. 207). Instead of experiencing surprise only one time throughout the game, users experience continual surprises as they encounter new challenges, battles, or characters in a game (Grodal, 2000). Suspense, an important storytelling tool in film (Vorderer, Wulff, & Friedrichsen, 1996), changes drastically when applied to games. A user's experience with a game revolves around the use of the avatar, which they must guide through a series of increasingly difficult tasks. Thus, although players may feel suspense about outcomes of the games, they are at the same time in control of those outcomes (to some extent). This fusion of narrative and interactivity results in a much different emotional experience than that of traditional entertainment (Grodal, 2000; Vorderer, 2000).

CONVERGENCE AND DIVERGENCE: VIDEO GAMES AND TRADITIONAL ENTERTAINMENT THEORY

Video games have altered the public conception of entertainment, but it follows that they must also transform the way that academics research entertainment. The differences between video games and traditional entertainment should force researchers to question an established base of research and demand not only assimilation into older theoretical traditions, but also the construction of new theories in the discipline.

There is a clear convention in entertainment research to investigate several different elements of the viewing experience, namely motivation, selection, experience, and effects (Vorderer, Klimmt, & Ritterfeld, 2004). These different phases of viewing capture the unique and variable emotional states that may guide or result from the use of entertainment. This practice in entertainment research has spawned numerous studies and research projects; so many, in fact, that it is impossible to cover them all in the space of this chapter. Instead, two of these theories will be discussed, alongside the problems that arise when video games become the object of investigation.

Mood Management Theory

One way to explain the motivation of individuals to use entertainment products is given by mood management theory (Zillmann, 1988a, 1988b; Zillmann & Bryant, 1985). The theory considers individuals as hedonically motivated to place themselves in situations in

which they amplify pleasure while ameliorating pain. Although the underlying conception of humans as beings who enjoy pleasurable experiences translates to situations other than entertainment, mass media situations represent a common practice individuals may employ to regulate mood states that are noxious and to maintain those that are satisfying (Oliver, 2003). Mood management theory asserts that one of the fundamental states that requires modification is physiological arousal. Overly stimulated or bored individuals may seek to use entertainment to reduce their arousal or stimulate their interest. Highly absorbing entertainment fare that is unrelated to an individual's current affective state can reduce stressful arousal levels because it is "likely to disrupt rehearsal processes that would perpetuate states of elevated arousal associated with negative affective experiences" (Zillmann, 1991, p. 109). Similarly, when faced with a choice, understimulated individuals turn to entertainment options that will increase their level of arousal to a "normal" degree (Bryant & Zillmann, 1984; Zillmann, 1991). Additionally, affective states can be regulated by media exposure. Individuals experiencing a negative mood turn to entertainment stimuli that will alleviate these feelings of sadness or upset, and instead provide feelings of joy or cheer (Oliver, 2003).

Video games, however, come as a challenge to mood management theory, because they provide a much different form of entertainment than traditional film or television. Games are very arousing, highly involving, and require the user to participate in the action instead of providing a distraction. Research on exactly which games are more stimulating to individuals and why is certainly needed. Also, perhaps certain other attributes of games—challenge, interpersonal activity while playing, or fast-paced action—have implications for how individuals can regulate their positive or negative affective states. Correspondingly, users may be forced to not only choose which content best suits their needs, but also which media will best modify their arousal level. Individuals seeking a reduction or increase in arousal have a host of options, and some might forego film or television in favor of games, or eschew their favorite games in favor of less stimulating material.

Affective Disposition Theory

Affective disposition theory (Zillmann, 1980, 1983, 1996; Raney, 2003; Raney & Bryant, 2002) represents a second element of the entertainment discipline, which is focused on the experience a viewer has as he or she is entertained. As a narrative unfolds, its central characters (are forced to) make choices. Disposition theory regards each of these choices as an opportunity for viewers to assess the moral valence of the characters—whether or not the characters' judgments are in line with an individual's own attitudes and beliefs. When characters act in a manner that is in line with a viewer's own opinions, the viewer hopes for positive outcomes and fears negative events for this character. Characters whose actions oppose the viewpoints of the individual are resented or disliked, and the viewer hopes for negative outcomes but fears that these characters will experience positive ends. At the end of the presentation, the resolution will be enjoyable if the desired outcomes are achieved (Zillmann, 2000).

Disposition theories, like mood management theory, are difficult to apply to video and computer games. According to Klimmt and Vorderer (2003), disposition theory considers the audience "to be passive witnesses of the ongoing events" (p. 351). However, as stated

earlier, the active audience is an essential component of video and computer games—which require not only action, but also *interaction* with the medium for successful results. Additionally, the lynchpin of disposition theory is the moral judgments individuals form about the actions of the characters. The avatars in nearly all computer games may be evaluated much differently than traditional characters, as the player controls them, rather than viewing their progress as a "moral monitor" (Zillmann, 2000, p. 38). Moral judgments about these characters may not apply because they are behaving in user-controlled patterns. Although these characters may invite users to empathize with their situations and form affective connections, thereby improving the sense of presence an individual feels (Klimmt & Vorderer, 2003), avatars are a problematic application of the basic tenets of disposition theory. Disposition theory, in its current state, is challenged when it is expected to explain the process of enjoyment that users feel as they play a game because it does not account for the unscripted nature of the medium (see, however, Bryant & Davies, chap. 13 in this volume).

Overall, from an academic point of view, the situation has become most interesting: Although there has been an established body of research on traditional entertainment, including well-supported theories and a pallet of empirical findings, many questions involving "new media" such as video and computer games remain open. How will entertainment theory deal with issues of interactivity? How do video games regulate mood states or arousal levels? What kinds of judgments or dispositions do game players form with their avatars, and what impact does this have not only on enjoyment of the game, but also on feelings, cognitions, attitudes, and behaviors? These are just a few of the many questions that will need to be dealt with as video games continue to infiltrate our lives.

IN THIS VOLUME

This book brings together scholars from various disciplines and from different countries around the globe to provide answers to questions like those just mentioned. It is structured into four segments that deal with the games themselves, that is, their content and their history, users' motivation and selection processes, their responses to these games, and the consequences that playing them may have on the users.

Before dealing with these aspects in detail, we first approach computer games twice from a business perspective: In his foreword, Stacey Spiegel contemplates the scope of this volume from his background as a CEO and president of Immersion Studios, Inc., a company that develops games and other multimedia products. Michael Sellers, straddling the typically separate worlds of academia and game design, looks at the process of designing a game from an industry standpoint.

With respect to the games themselves, four chapters introduce and describe their most important features: Henry Lowood traces the history of computer games by providing a brief, but nevertheless most comprehensive, biography of computer games. The following two chapters content-analyze the most popular current games, that is, systematically describe what may be found in these. Barry Smith does this with a rather broad scope that serves very well as a general introduction. Stacy Smith is particularly interested in negative content patterns and character portrayals, such as perps, pimps, and

provocative clothing. By analyzing their "weight," she addresses the eligibility of many public concerns expressed in recent years. The final chapter in this section deals with so-called massively multiplayer online games, which Elaine Chan and Peter Vorderer introduce as a new and quite different spin on computer games.

Following a rather established allocation of different phases of the entertainment process, section 2 of this book deals with the processes of motivation and selection, essentially asking, "Why do people play games?" Again, a number of very different perspectives, academic disciplines, theories, and paradigms are put together to illuminate these topics in all their complexity: Jesse Schell and Chris Klug lead off this section by providing answers that are dominant within the game industry. Very much in contrast to this approach, Peter Ohler and Gerhild Nieding take an evolutionary perspective on game play and selection, a stance that has become prominent in contemporary psychology. The following two chapters then use personality theory, motivational psychology, and communication theory to address the question of selection: In the first chapter by Tilo Hartmann and Christoph Klimmt, the role that personality factors play in the selection of computer games is addressed. In the subsequent chapter by Christoph Klimmt and Tilo Hartmann, effectance motivation and self-efficacy, in particular, account for the motivation and selection of specific games. Two further chapters in this section examine players of different ages: Maria von Salisch, Caroline Oppl, and Astrid Kristen explore why children, arguably the most vulnerable group of players, are attracted to games. And Arthur Raney, Jason Smith, and Kaysee Baker focus on adolescents, for whom games have become such an important factor in life. Jennings Bryant and John Davies unite these age variables and others to integrate them in their explanation of selective exposure to computer games.

While the preceding section deals with motivation and selection—that is, processes that occur before the actual entertainment experience—section 3 of this book focuses on reception and reaction processes, such that develop in a phase when somebody is in fact engaged in play and, hopefully, entertained. The section opens with a chapter by Dmitri Williams, who provides a social history of game play, asking, "How has the way we have played computer games changed over the years?" John Sherry, Kristen Lucas, Bradley Greenberg, and Ken Lachlan then take on a very popular research paradigm in communication to summarize what we know about the uses and gratifications of computer games. The four following chapters deal with specific aspects (i.e., features) of the entertainment experience that occur as a particular response to playing computer games: Ron Tamborini and Paul Skalski examine the role of presence (as a "sense of being there") in playing. Sean Zehnder and Scott Lipscomb do this in respect to the role of music in games. Kwan Min Lee, Namkee Park, and Seung-A Jin discuss the importance of narrative and of interactivity in games, and Michael Shapiro, Jorge Peña-Herborn, and Jeff Hancock summarize what is known about the relevance of realism and imagination in computer games. The final two chapters in this section address the playing of online games: Ann-Sofie Axelsson and Tim Regan discuss what it means to play online by examining *Asheron's Call,* and Francis Steen, Patricia Greenfield, Mari Siân Davies, and Brendesha Tynes pick another game, *The Sims Online,* to examine why, in contrast to its offline version *(The Sims),* the online version has failed so dramatically.

The final section of the book is devoted to the various effects and consequences playing computer games can have on their users. Again, the section starts with an

overview of what is known in respect to the topic: Kwan Min Lee and Wei Peng summarize the social and psychological effects of computer games. Their chapter is followed by René Weber, Ute Ritterfeld, and Anna Kostygina, who introduce current theoretical positions on the effects of violent games, discuss various methodologies to investigate the short-term and long-term impacts of game playing, and report empirical findings. Katherine Buckley and Craig Anderson then elaborate and expand the most prominent theoretical model about the effects of violent games, namely the general aggression model (GAM), in their chapter. Whereas these chapters primarily focus on negative effects, the final chapters turn the question around and ask what can be and what is actually learned by playing games: Debra Lieberman gives an overview of various studies that show the educational potential of playing. Ute Ritterfeld and René Weber look particularly at the potential of interactivity for enjoyment and the enhancement of developmental processes while elaborating paradigms of entertainment-education. Finally, Kevin Durkin claims that adolescent users are "at risk" if they do not grow up with games.

This sheer quantity of ideas, assumptions, perspectives, theses, and research results is admittedly quite a reading load for anyone who is interested in the study of this new medium. Up to now, there have been no canonized research programs, undisputed theories, or conclusive findings concerning the uses, enjoyment, and consequences of playing electronic games. The field grows rapidly and diversely, driven primarily by the energy of junior scholars who try to come to terms with the entertainment medium that still persists from their childhood. No doubt, this field is still very much work in progress. The only thing that may already be stated is that computer games have become extremely important for people of different ages and cultures, and gender alike. Games are just about to become the most important entertainment product that people use for leisure. This book solicits, examines, and further encourages systematic research on playing computer games by approaching it from different disciplines and research paradigms, and from scholars around the globe, in order to account for the great complexity of this new phenomenon.

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